

**Docket No. 272**

The United Illuminating Company and the Connecticut Light & Power Company application for a Certificate of Environmental Compatibility and Public Need for the construction of a 345kV electric transmission line and associated facilities between the Scovill Rock Switching Station in the Town of Middletown and the Norwalk Substation in the City of Norwalk, Connecticut.

**APPENDIX C**  
**SUBSTATION DRAWINGS**

Docket No. 272

The United Illuminating Company and the Connecticut Light & Power Company application for a Certificate of Environmental Compatibility and Public Need for the construction of a 345kV electric transmission line and associated facilities between the Scovill Rock Switching Station in the Town of Middletown and the Norwalk Substation in the City of Norwalk, Connecticut.

## **APPENDIX C TABLE OF CONTENTS SUBSTATION DRAWINGS**

### **SINGER SUBSTATION**

<b><u>Drawing No.</u></b>	<b><u>Drawing Title</u></b>
25251-400	Singer Substation Arrangement Plan
25251-401	Singer Substation Sections 1 and 2
25251-402	Singer Substation Section 3 - GIS Enclosure
25251-500	Singer Substation Grading Plan
25251-501	Singer Substation Foundation Plan
25251-502	Singer Substation Foundation Details GIS Enclosure
25251-503	Singer Substation Foundation Details Control Building
25251-504	Singer Substation Foundation Details 345kV Shunt Reactor
25251-505	Singer Substation Foundation Details 345/115kV Autotransformer
25251-506	Singer Substation Foundation Details Foundations 5,6,7, & 8

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**PEQUONNOCK SUBSTATION**

<b><u>Drawing No.</u></b>	<b><u>Drawing Title</u></b>
25247-001	Pequonnock Substation Electrical Site Plan
25247-400	Pequonnock Substation 115kV Equipment Plan Elev. 57'-0" & Below
25247-400SH2	Pequonnock Substation 115kV Equipment Plan Elev. 57'-0" & Below (Bay 50 Extension)
25247-401	Pequonnock Substation Plan Elev. 66'-6"
25247-401 (SH2)	Pequonnock Substation Plan Elev. 66'-6" (Bay 50 Extension)
25247-405	Pequonnock Substation Sections A – A & B – B
25247-406	Pequonnock Substation Sections C – C & D – D
25247-406SH2	Pequonnock Substation Sections C – C & D – D (Con't) (Bay 50 Extension)
25247-407	Pequonnock Substation Section E – E
25247-430	Pequonnock Substation Section 6 – 6 (Bay 50 Extension)

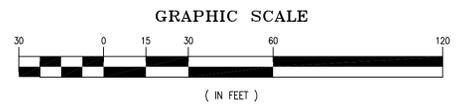
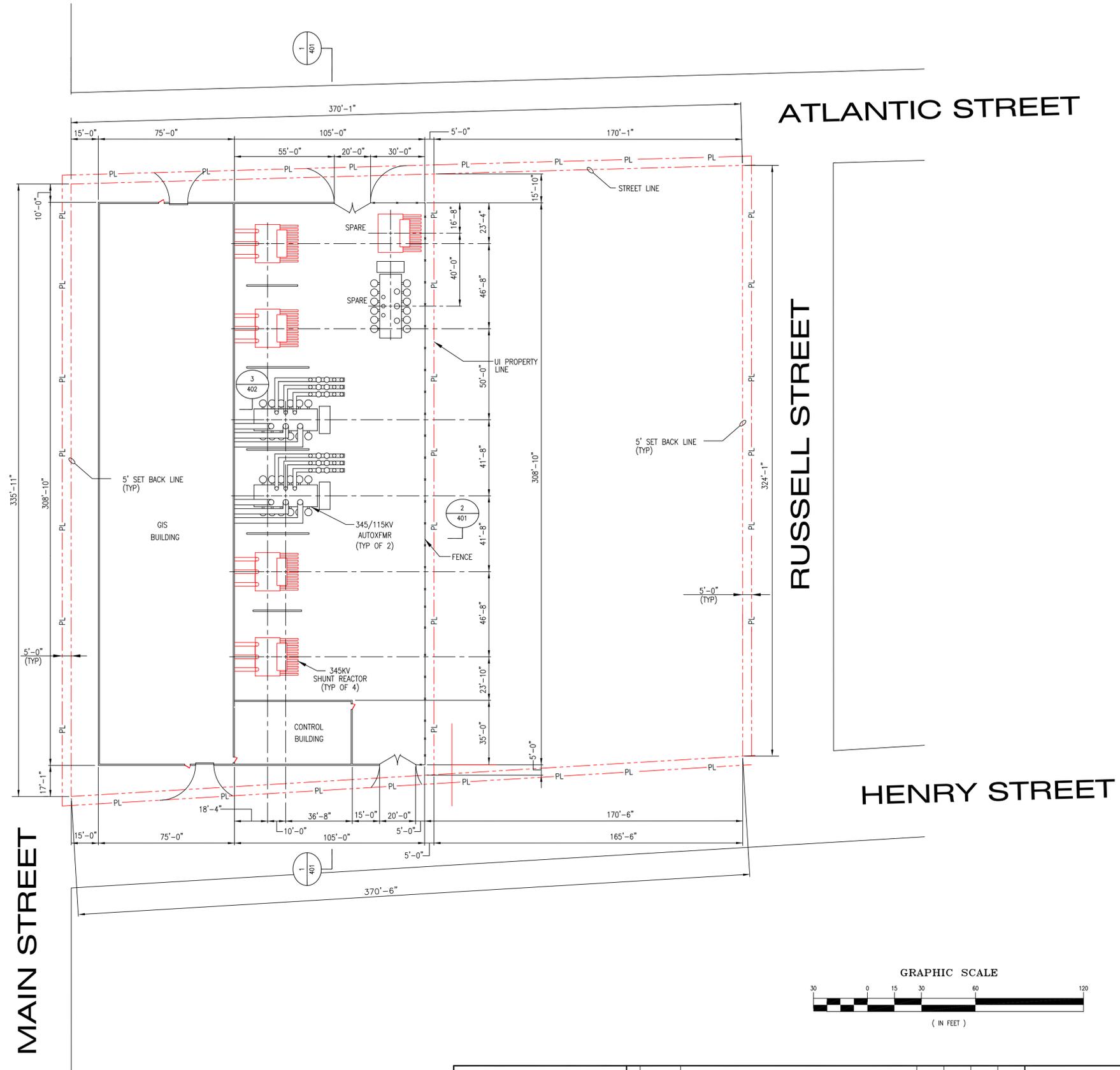
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**BRIDGEPORT ENERGY SWITCHYARD**

<b><u>Drawing No.</u></b>	<b><u>Drawing Title</u></b>
25250-400	Bridgeport Energy Switching Station Switchyard Bus & Equipment Plan
25250-401	Bridgeport Energy Switching Station 115kV Switchyard Sections
25250-401 SH2	Bridgeport Energy Switching Station 115kV Switchyard Sections

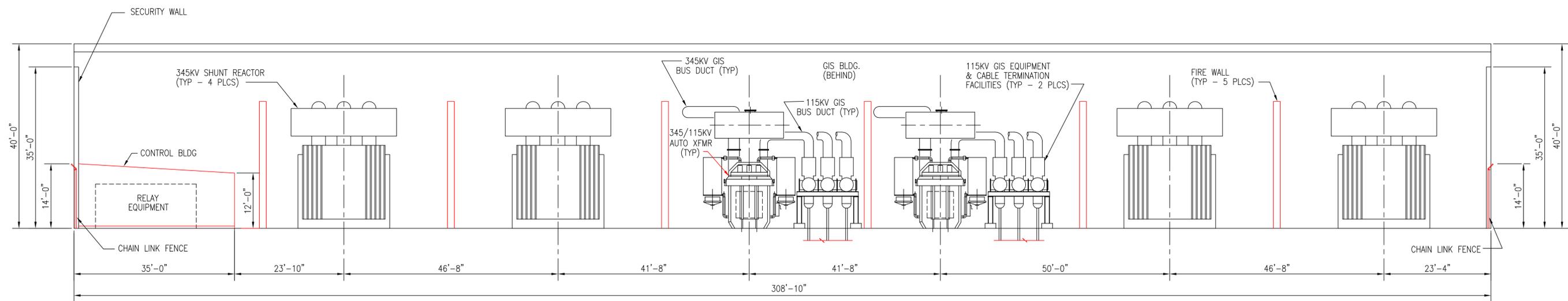
NOTE:  
 1. ALL DIMENSIONS ARE PRELIMINARY AND WILL BE FINALIZED AFTER REVIEW OF APPROVED A-2 SURVEY, AND MANUFACTURER'S DRAWING WITH INFORMATION.



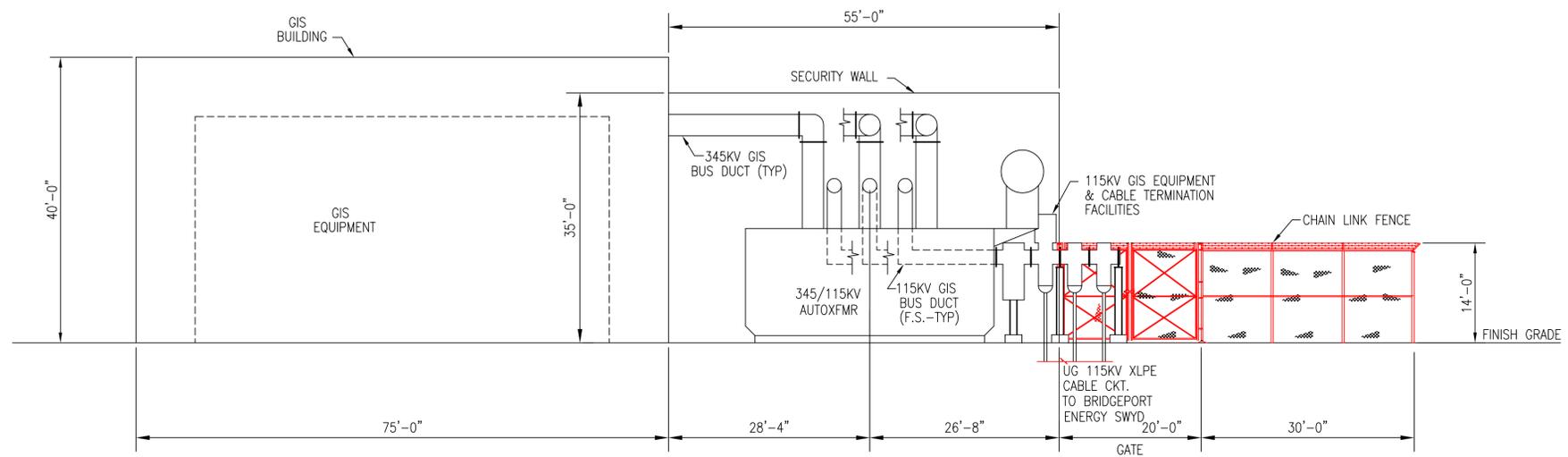
**PRELIMINARY**  
 NOT TO BE USED FOR CONSTRUCTION

	PROJECT NO. 136745				 The United Illuminating Company 157 Church St. New Haven, Ct. 06506	SINGER SUBSTATION ARRANGEMENT PLAN			
	DRAWN CC DESIGNED ACM APPROVED CHECKED	0 No	04-11-05 Date	INITIAL ISSUE Revision		CC By	ACM Chkd. Engr.	Drawn Chkd.	Date Design Engr.

**NOTE:**  
 1. ALL DIMENSIONS ARE PRELIMINARY AND WILL BE FINALIZED AFTER REVIEW OF APPROVED A-2 SURVEY, AND MANUFACTURER'S DRAWING AND INFORMATION.



SECTION 1

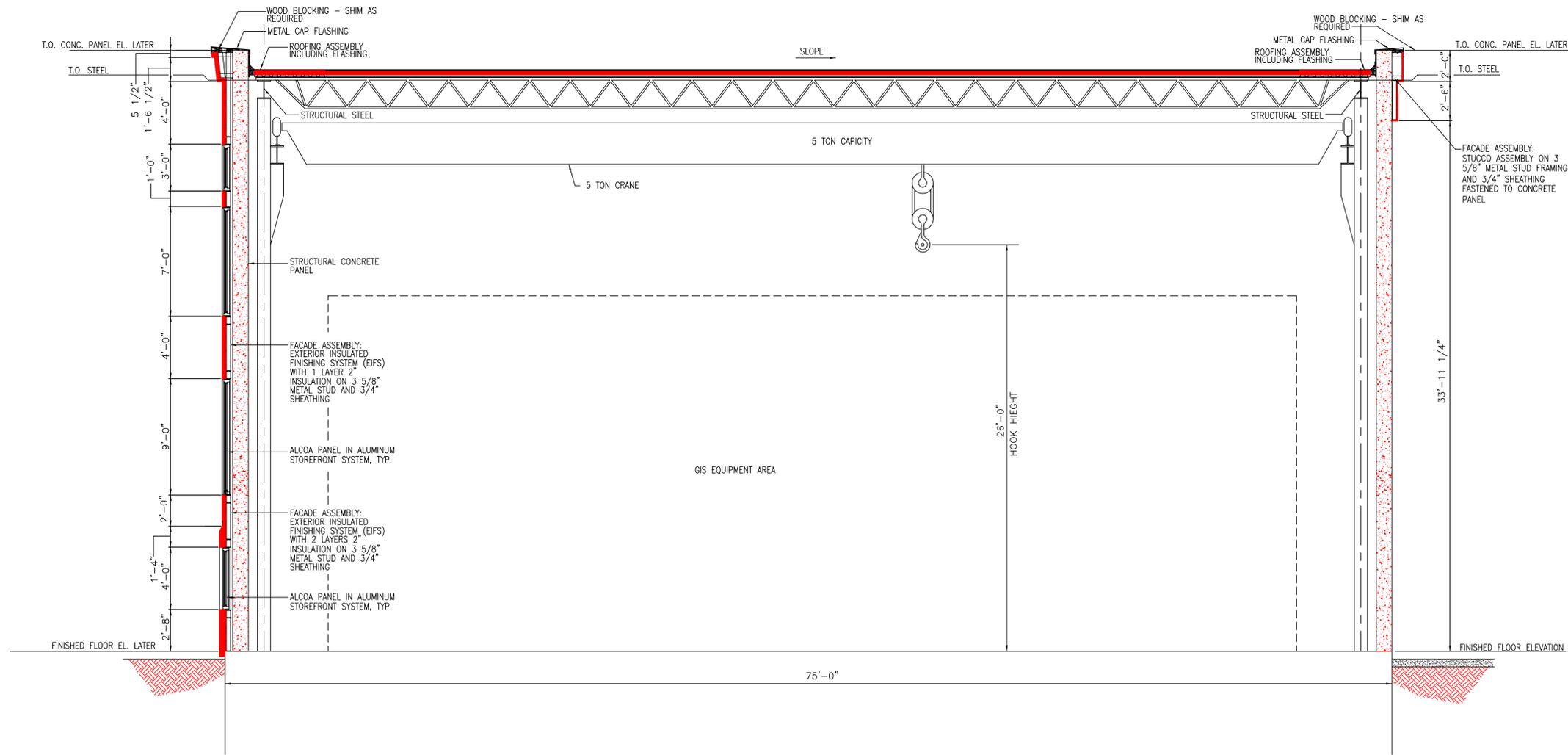


SECTION 2

**PRELIMINARY**  
 NOT TO BE USED FOR CONSTRUCTION

<b>BLACK &amp; VEATCH</b> PROJECT NO. 136745		<b>The United Illuminating Company</b> 157 Church St. New Haven, Ct. 06506		<b>SINGER SUBSTATION</b> SECTIONS 1 AND 2	
DRAWN CC DESIGNED ACM APPROVED CHECKED	0 04/11/05 No Date	INITIAL ISSUE Revision	CC ACM By Chkd. Engr. Supv.	Drawn _____ Date _____ Chkd. _____ Design Engr. _____	CAD FILE NAME _____ SEQUENCE No. _____ DRAWING NUMBER 25251-401
			Scale: 3/32"=1'-0"		

**NOTE:**  
 1. ALL DIMENSIONS ARE PRELIMINARY AND WILL BE FINALIZED AFTER REVIEW OF APPROVED A-2 SURVEY, AND MANUFACTURER'S DRAWING AND INFORMATION.



**PRELIMINARY**

NOT TO BE USED FOR CONSTRUCTION

	PROJECT NO. 136745						 157 Church St. New Haven, Ct. 06506	SINGER SUBSTATION SECTION 3-GIS ENCLOSURE			
	DRAWN CC DESIGNED ACM APPROVED CHECKED	04-11-05 No	INITIAL ISSUE Date	Revision	CC By	ACM Chkd. Engr. Supv.		Drawn Chkd.	Date Design Engr.	Scale: 1/4" = 1'-0" Design Supv.	CAD FILE NAME

**NOTES:**

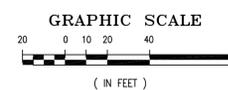
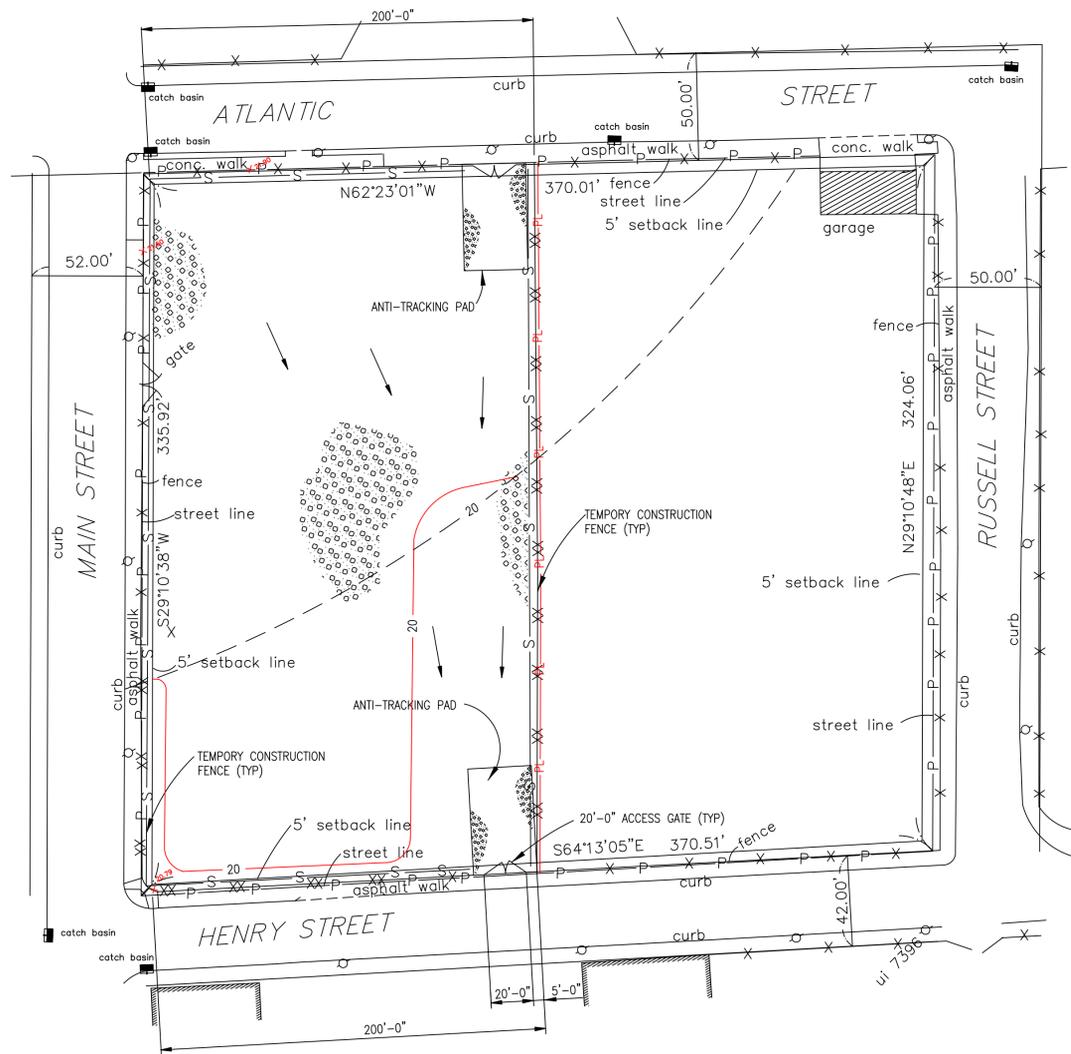
- THIS MAP AND SURVEY HAVE BEEN PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300B-1 THROUGH 20-300B-20. THE TYPE OF SURVEY IS A PROPERTY SURVEY. THE DETERMINATION CATEGORY IS A RESURVEY AND THE CLASS OF ACCURACY IS A-2.
- REFERENCE IS MADE TO THE FOLLOWING MAP:  
A) "MAP #529, BLOCK MAP, CITY OF BRIDGEPORT  
B) "UNITED ILLUMINATING COMPANY, BRIDGEPORT HARBOR STATION, BRIDGEPORT, CONNECTICUT, SCALE 1"=100', REVISED TO APRIL 12, 1999" AS PREPARED BY CLARENCE BLAIR ASSOCIATES, INC, NEW HAVEN, CONNECTICUT.
- PROPERTY IS ZONED I-HI (INDUSTRIAL HEAVY ZONE)  
MINIMUM SETBACK FROM STREET LINE = 5 FEET  
MAXIMUM LOT COVERAGE = 100%  
(SEE TABLE 7.2.3 CITY OF BRIDGEPORT ZONING REGULATIONS)
- BEARINGS ARE BASED ON UNIT 3, BRIDGEPORT HARBOR STATION BASE LINE
- CONTOURS SHOWN REPRESENT SUBGRADE ELEVATIONS. SUBGRADE IS DEFINED AS ELEVATION PRIOR TO AGGREGATE SURFACING OR ROAD SURFACING.
- AGGREGATE SURFACING SHALL EXTEND TO FENCE OR AS DIRECTED BY UNITED ILLUMINATING CO.

**BENCHMARKS**

(LATER)

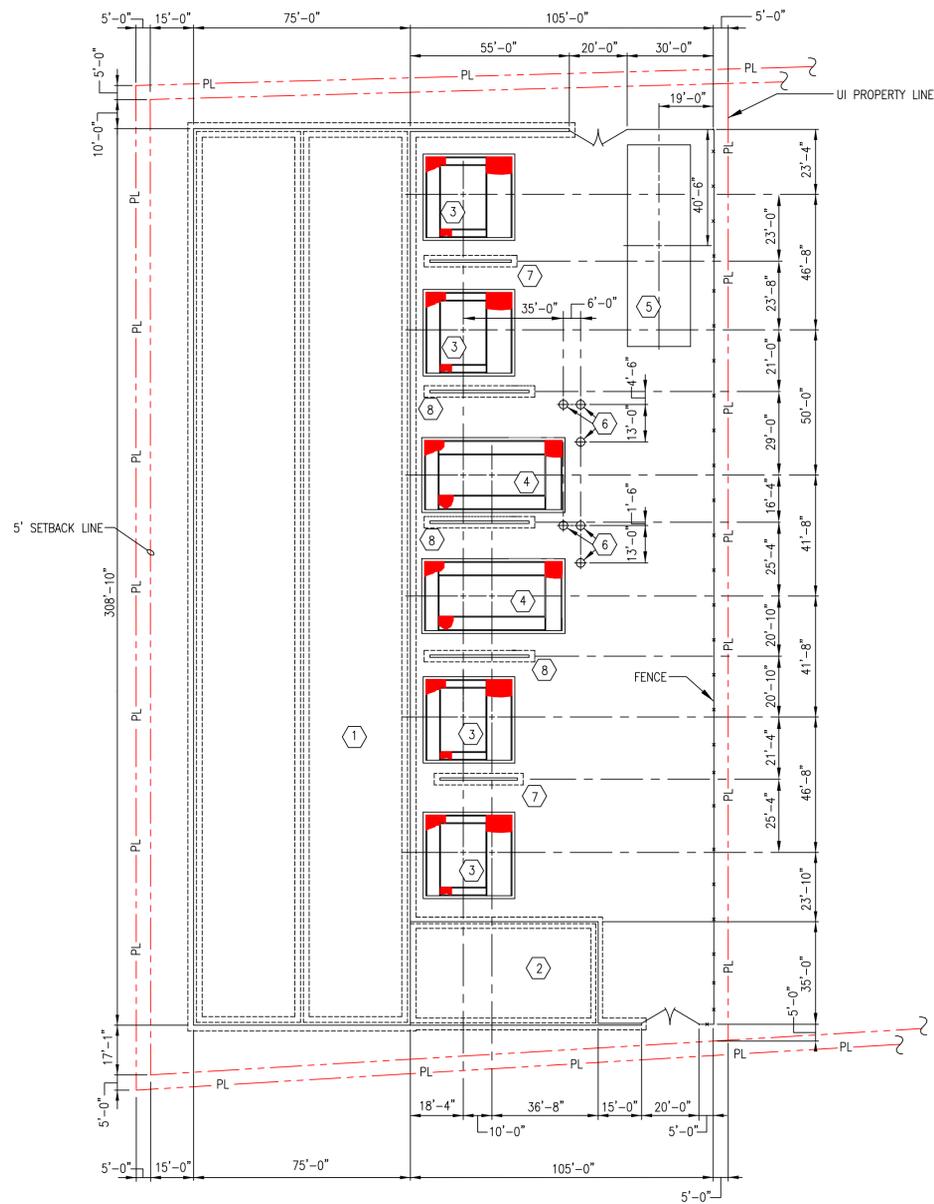
**LEGEND**

- x SPOT ELEVATION
- AGGREGATE SURFACING (6" LAYER)
- EXISTING CONTOURS
- NEW CONTOURS
- X-X EXISTING FENCE
- XX-XX NEW FENCE
- S- TEMPORARY SEDIMENT FENCE
- P- PROPERTY LINE
- ← DRAINAGE FLOW PATH



**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION

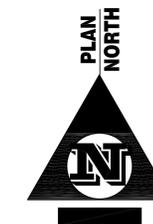
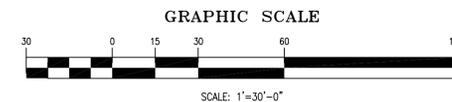
	PROJECT NO. 136745				SINGER SUBSTATION GRADING PLAN						
	DRAWN CC DESIGNED ACM APPROVED CHECKED	04-11-05 No	INITIAL ISSUE Date		CC By	ACM Engr.	Supv. Chkd.	Drawn Date	Scale: 1"=40'-0" Design Engr.	Design Supv.	CAD FILE NAME



FOUNDATION IDENTIFICATION	
FDN NO.	DESCRIPTION
1	GIS BUILDING FOUNDATION
2	CONTROL BUILDING FOUNDATION
3	345KV SHUNT REACTOR FOUNDATION
4	345/115KV AUTOTRANSFORMER FOUNDATION
5	SPARE REACTOR AND TRANSFORMER FOUNDATION
6	115KV GIS EQUIPMENT TERMINATION FOUNDATION
7	345KV SHUNT REACTOR FIREWALL FOUNDATION
8	345/115KV AUTOTRANSFORMER FIREWALL FOUNDATION

- NOTES**
- FOUNDATION CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE UI CONSTRUCTION SPECIFICATION.
  - MINIMUM STRENGTH OF CONCRETE AT 28 DAY TESTING (F'c) SHALL BE 4000 PSI.
  - ALL REINFORCING STEEL SHALL BE ASTM A615, GRADE 60.
  - ALL FOUNDATION TOP OF CONCRETE ELEVATIONS (TOC EL.) AS NOTED.
  - ALL DIMENSIONS ARE PRELIMINARY AND WILL BE FINALIZED AFTER REVIEW OF APPROVED MANUFACTURER'S DRAWINGS AND INFORMATION.

- LEGEND**
- (X) FOUNDATION IDENTIFICATION
  - FOUNDATION LOCATION
  - - - PL - - - PROPERTY LINE



**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION

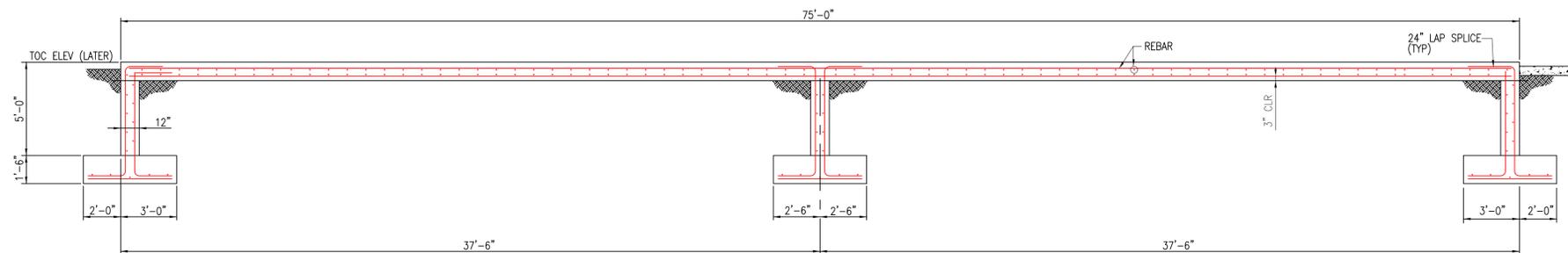
<b>BLACK &amp; VEATCH</b> PROJECT NO. 136745	<b>The United Illuminating Company</b> 157 Church St. New Haven, Ct. 06506			<b>SINGER SUBSTATION</b> <b>FOUNDATION PLAN</b>	
	DRAWN CC DESIGNED ACM APPROVED _____ CHECKED _____	0 04-11-05 INITIAL ISSUE No Date Revision	CC ACM By Chkd. Engr. Supv.	Drawn _____ Date 04/11/05 Scale: 1"=30'-0" Chkd. _____ Design Engr. _____ Design Supv. _____	CAD FILE NAME _____ SEQUENCE No. _____ DRAWING NUMBER 25251-501

**NOTES:**

1. ALL ABOVE GRADE FOUNDATION EDGES SHALL HAVE A 1" CHAMFER UNLESS NOTED OTHERWISE.
2. ALL ABOVE GRADE FOUNDATIONS SLABS SHALL RECEIVE A LIGHT BROOM FINISH.
3. CONTRACTOR SHALL MOISTEN EXISTING SOIL PRIOR TO PLACING CONCRETE TO PREVENT MOISTURE LOSS FROM CONCRETE.
4. PIERS SHALL BE CONSTRUCTED MONOLITHICALLY WITH THE TOP SECTION FORMED AS INDICATED ON DETAIL.
5. CONTRACTOR SHALL PLACE REINFORCING BARS TO PREVENT INTERFERENCE WITH LOCATION OF ANCHOR BOLTS.
6. ALL DIMENSIONS ARE PRELIMINARY AND WILL BE FINALIZED AFTER REVIEW OF APPROVED MANUFACTURERS DRAWINGS AND INFORMATION.



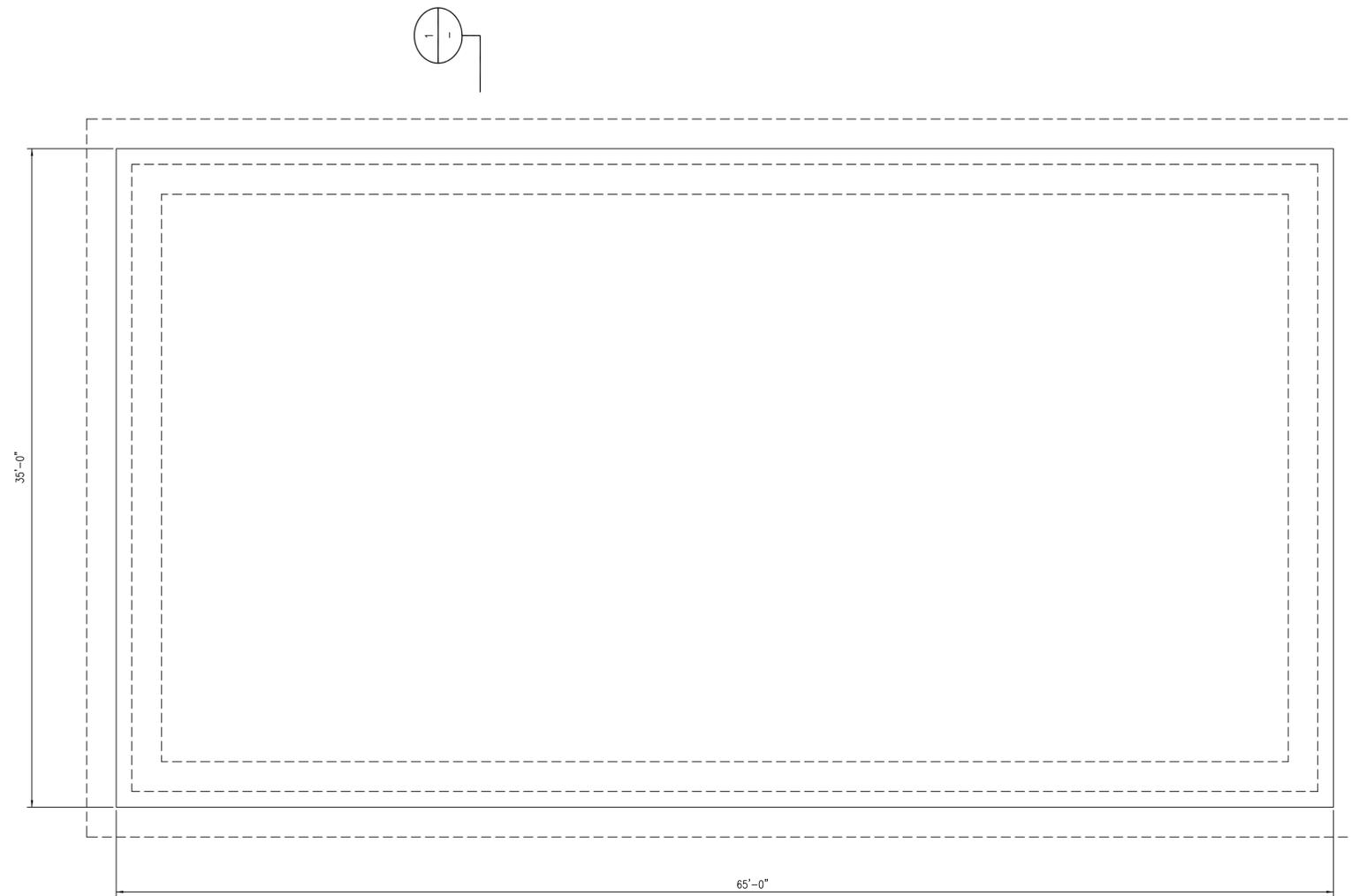
GIS BUILDING FOUNDATION  
SCALE: 3/32"=1'-0"



SECTION 1  
SCALE: 1/4"=1'-0"

**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION

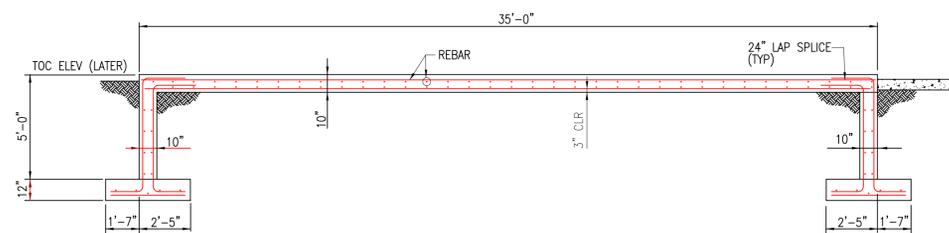
	PROJECT NO. 136745					SINGER SUBSTATION FOUNDATION DETAILS GIS ENCLOSURE		
	DRAWN CC DESIGNED ACM APPROVED CHECKED	04-11-05 No Date	INITIAL ISSUE Revision	CC ACM By Chkd. Engr. Supv.		Drawn Chkd.	Date Design Engr.	Scale: AS SHOWN Design Supv.



NOTES:  
1. REFER TO DWG 25251-502 FOR NOTES.

CONTROL BUILDING FOUNDATION

2



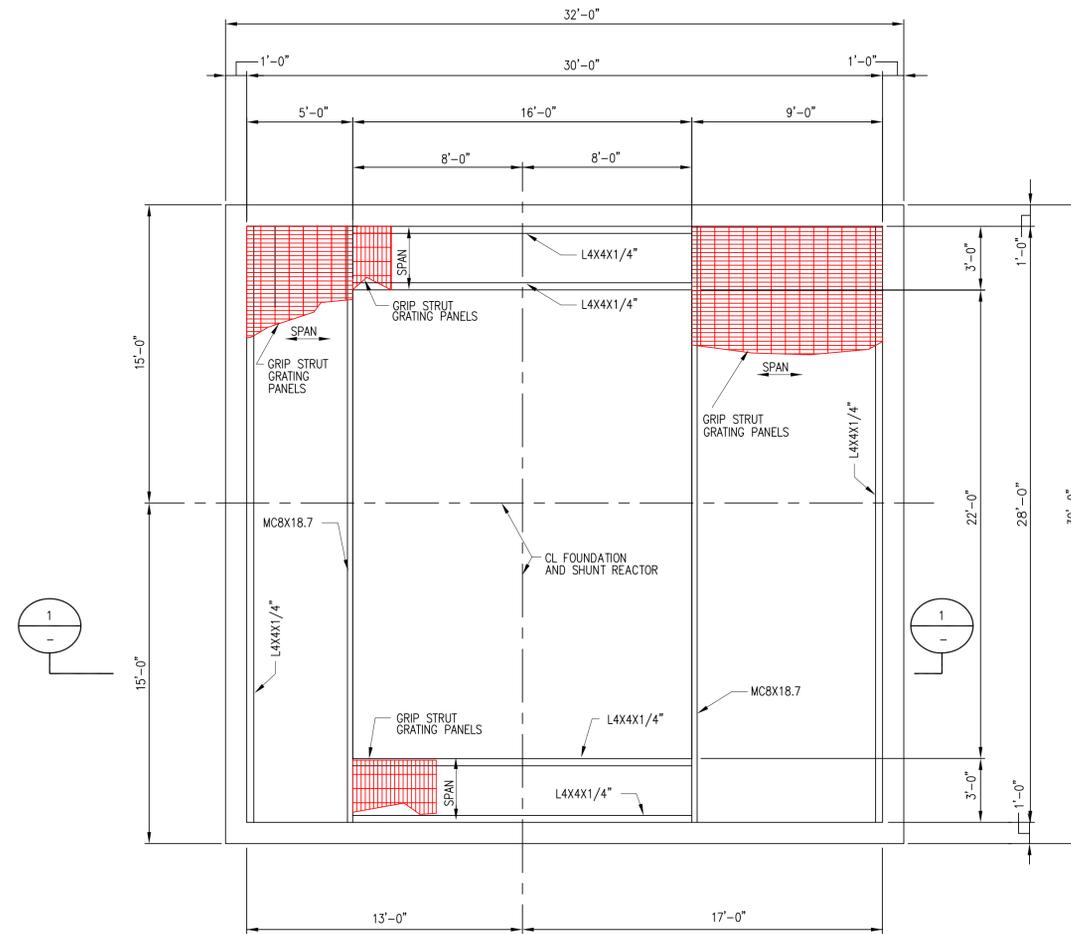
SECTION 1

**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION

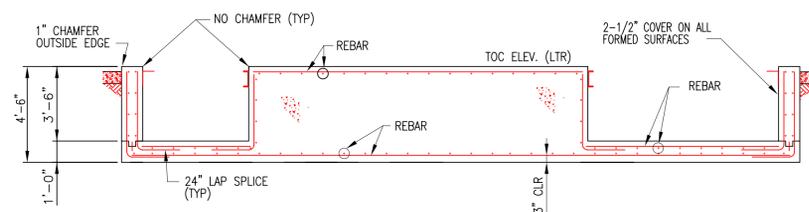
	PROJECT NO. 136745					SINGER SUBSTATION FOUNDATION DETAILS CONTROL BUILDING				
	DRAWN CC DESIGNED ACM APPROVED CHECKED	04-11-05 No	INITIAL ISSUE Date	Revision		CC By	ACM Chkd. Engr.	Drawn Chkd.	Date Design Engr.	Scale: 1/4"=1'-0" Design Supv.

NOTES:

1. FOR FOUNDATION NOTES, SEE DRAWING 25251-502.



SHUNT REACTOR FDN

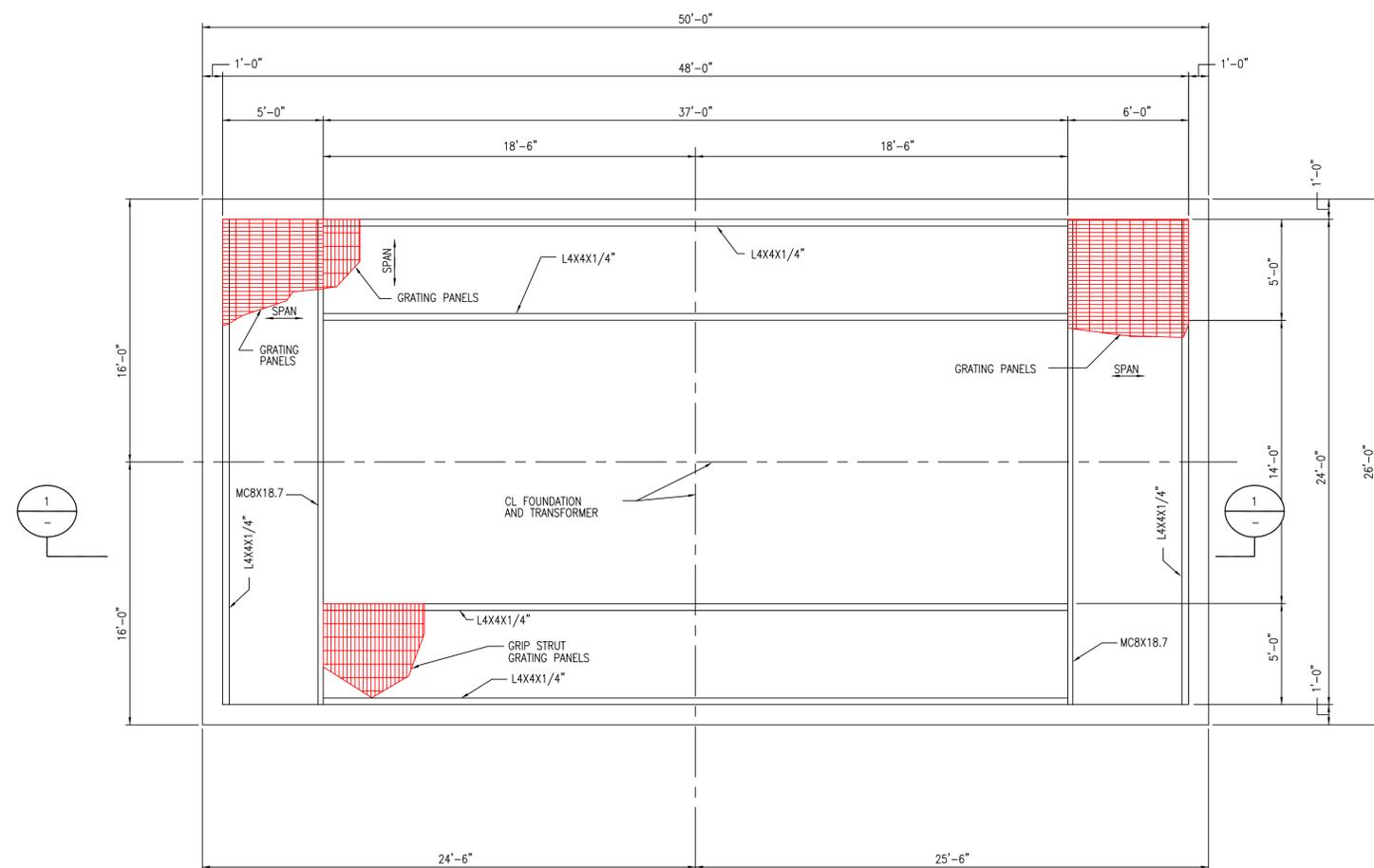


SECTION 1

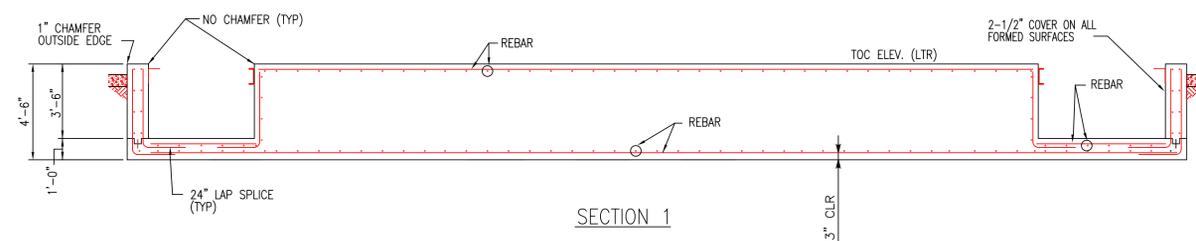
**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION

<p>BLACK &amp; VEATCH</p> <p>PROJECT NO. 136745</p>					<p>The United Illuminating Company</p> <p>157 Church St. New Haven, Ct. 06506</p>	SINGER SUBSTATION FOUNDATION DETAILS 345KV SHUNT REACTOR			
	DRAWN CC DESIGNED ACM APPROVED CHECKED	04-11-05 No Date	INITIAL ISSUE Revision	CC By		ACM Chkd. Engr. Supv.	Drawn Chkd.	Date Design Engr.	Scale: 1/4"=1'-0" Design Supv.

NOTES:  
 1. FOR FOUNDATION NOTES, SEE DRAWING 25251-502.

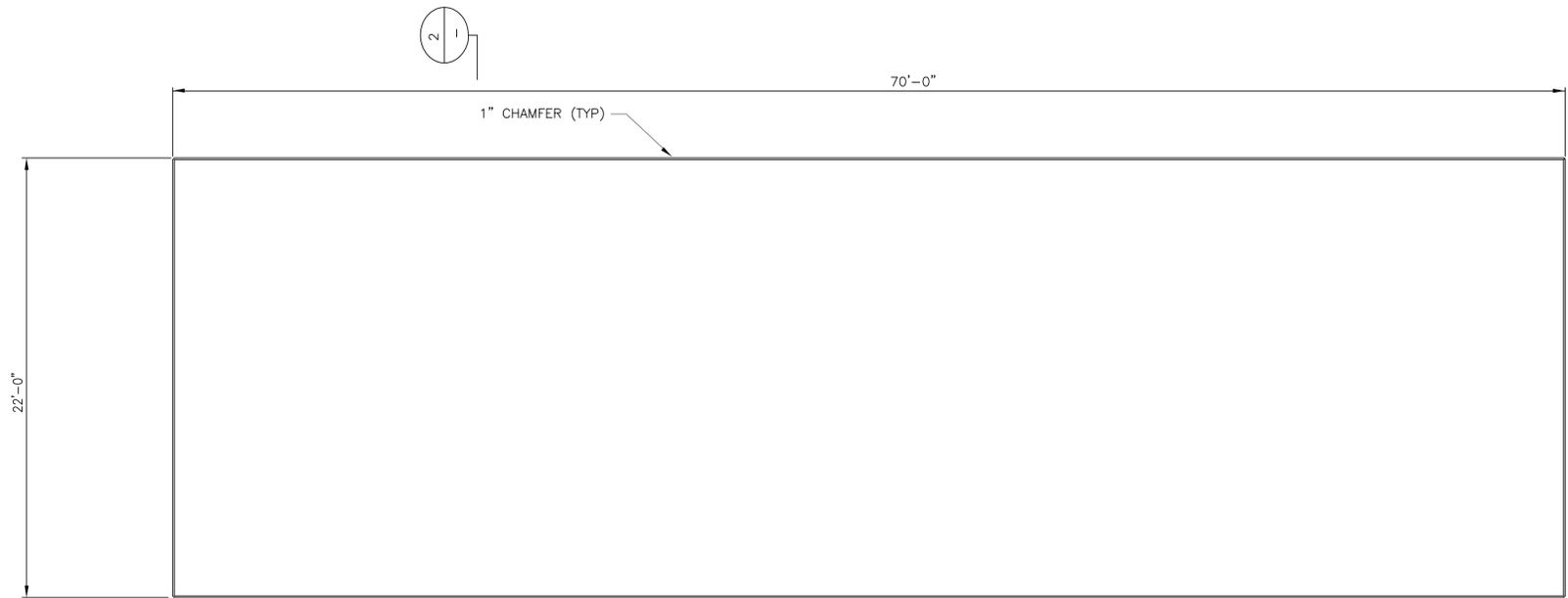
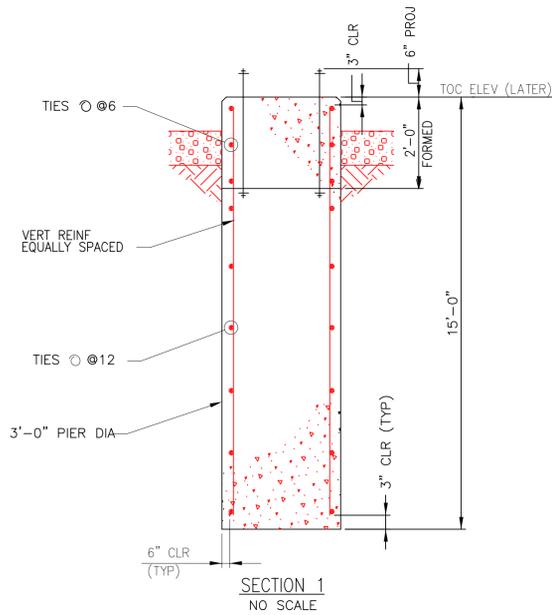
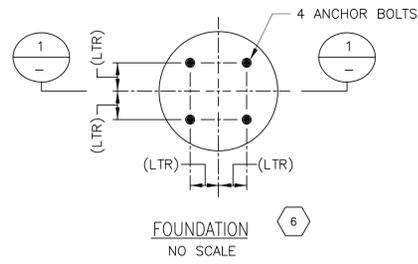


TRANSFORMER FDN 2

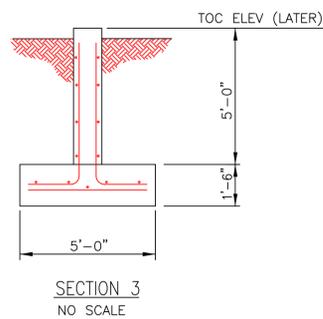
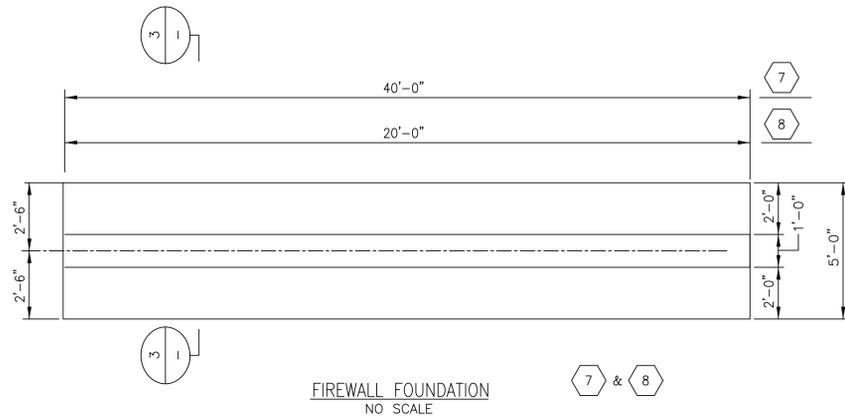
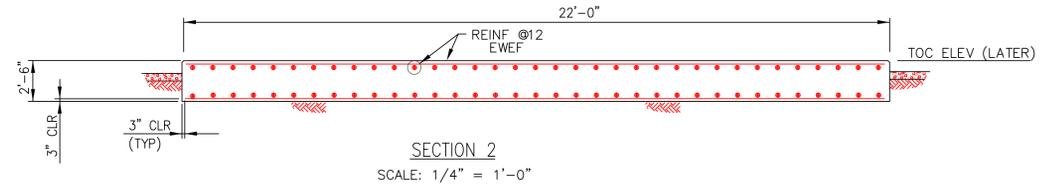


**PRELIMINARY**  
 NOT TO BE USED FOR CONSTRUCTION

	PROJECT NO. 136745			SINGER SUBSTATION FOUNDATION DETAILS	
	DRAWN CC DESIGNED ACM APPROVED CHECKED	0 04-11-05 INITIAL ISSUE No Date Revision		CC ACM By Chkd. Engr. Supv.	Drawn _____ Date _____ Scale: 1/4"=1'-0" Chkd. _____ Design Engr. _____ Design Supv. _____



SPARE XFMR & REACTOR FOUNDATION  
SCALE: 1/4" = 1'-0"



NOTE:  
1. ALL DIMENSIONS ARE PRELIMINARY AND WILL BE FINALIZED AFTER REVIEW OF APPROVED A-2 SURVEY, AND MANUFACTURER'S DRAWING AND INFORMATION.

**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION

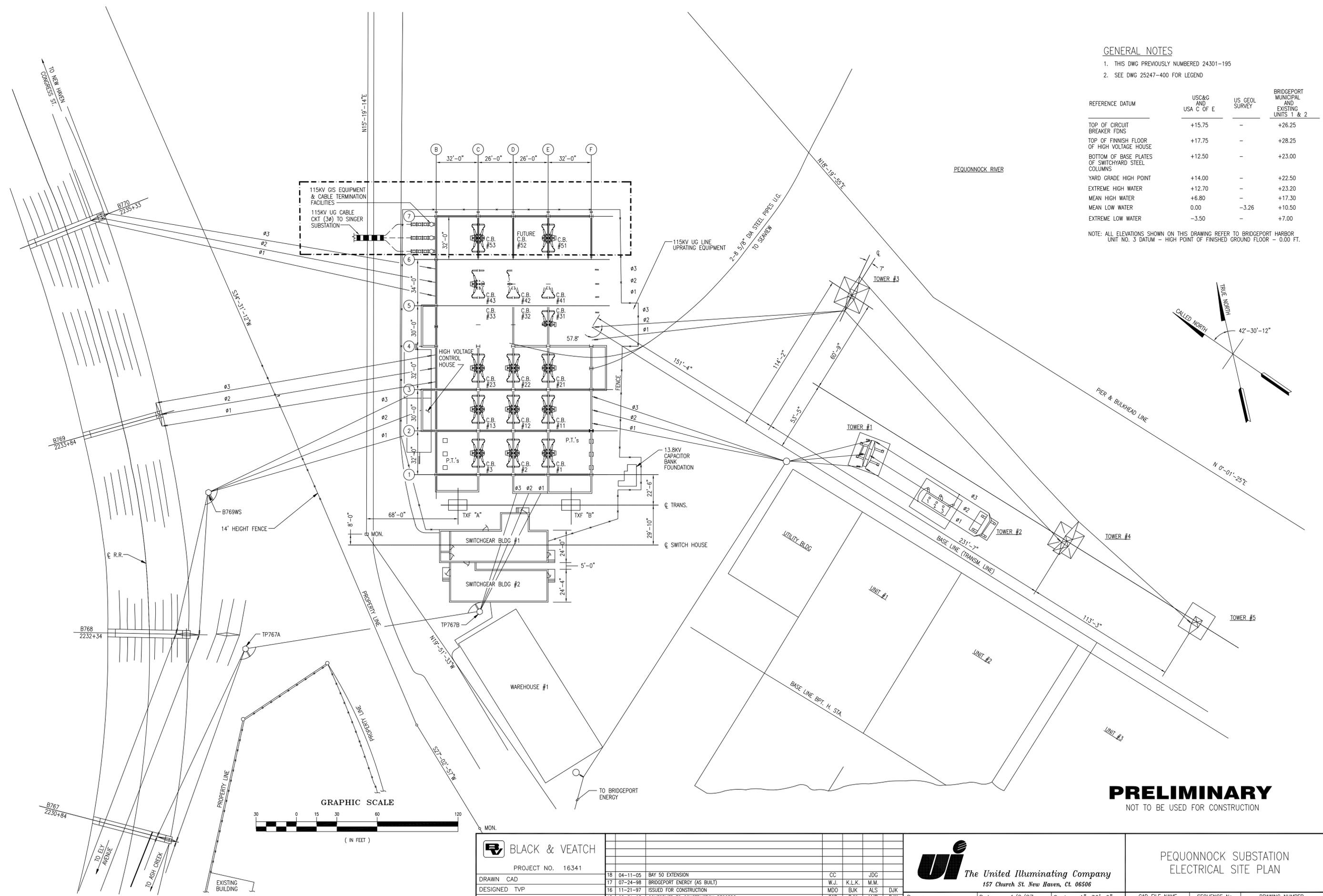
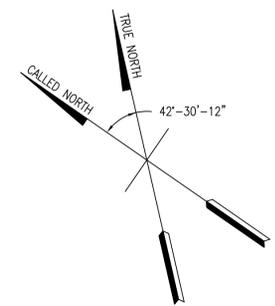
<p>BLACK &amp; VEATCH PROJECT NO. 136745</p>	<p>The United Illuminating Company 157 Church St. New Haven, Ct. 06506</p>			<p>SINGER SUBSTATION FOUNDATIONS 5, 6, 7 &amp; 8</p>	
	<p>DRAWN CC DESIGNED ACM APPROVED CHECKED</p>	<p>0 04-11-05 INITIAL ISSUE No Date</p>	<p>CC ACM Revision</p>	<p>By Chkd, Engr, Supv.</p>	<p>Drawn Date Chkd. Design Engr. Design Supv.</p>

**GENERAL NOTES**

1. THIS DWG PREVIOUSLY NUMBERED 24301-195
2. SEE DWG 25247-400 FOR LEGEND

REFERENCE DATUM	USC&G AND USA C OF E	US GEOL SURVEY	BRIDGEPORT MUNICIPAL AND EXISTING UNITS 1 & 2
TOP OF CIRCUIT BREAKER FDNS	+15.75	-	+26.25
TOP OF FINNISH FLOOR OF HIGH VOLTAGE HOUSE	+17.75	-	+28.25
BOTTOM OF BASE PLATES OF SWITCHYARD STEEL COLUMNS	+12.50	-	+23.00
YARD GRADE HIGH POINT	+14.00	-	+22.50
EXTREME HIGH WATER	+12.70	-	+23.20
MEAN HIGH WATER	+6.80	-	+17.30
MEAN LOW WATER	0.00	-3.26	+10.50
EXTREME LOW WATER	-3.50	-	+7.00

NOTE: ALL ELEVATIONS SHOWN ON THIS DRAWING REFER TO BRIDGEPORT HARBOR UNIT NO. 3 DATUM - HIGH POINT OF FINISHED GROUND FLOOR - 0.00 FT.



**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION

**BLACK & VEATCH**  
PROJECT NO. 16341

DRAWN	CAD	CC	JDG
DESIGNED	TVP	W.J.	K.L.K. M.M.
APPROVED	DJK	MDO	BJK ALS DJK
CHECKED	TJJ	CAD	DJK MJP DJK
	No	Date	Revision
	By	Chkd.	Engr. Supv.

**ui** The United Illuminating Company  
157 Church St. New Haven, Ct. 06506

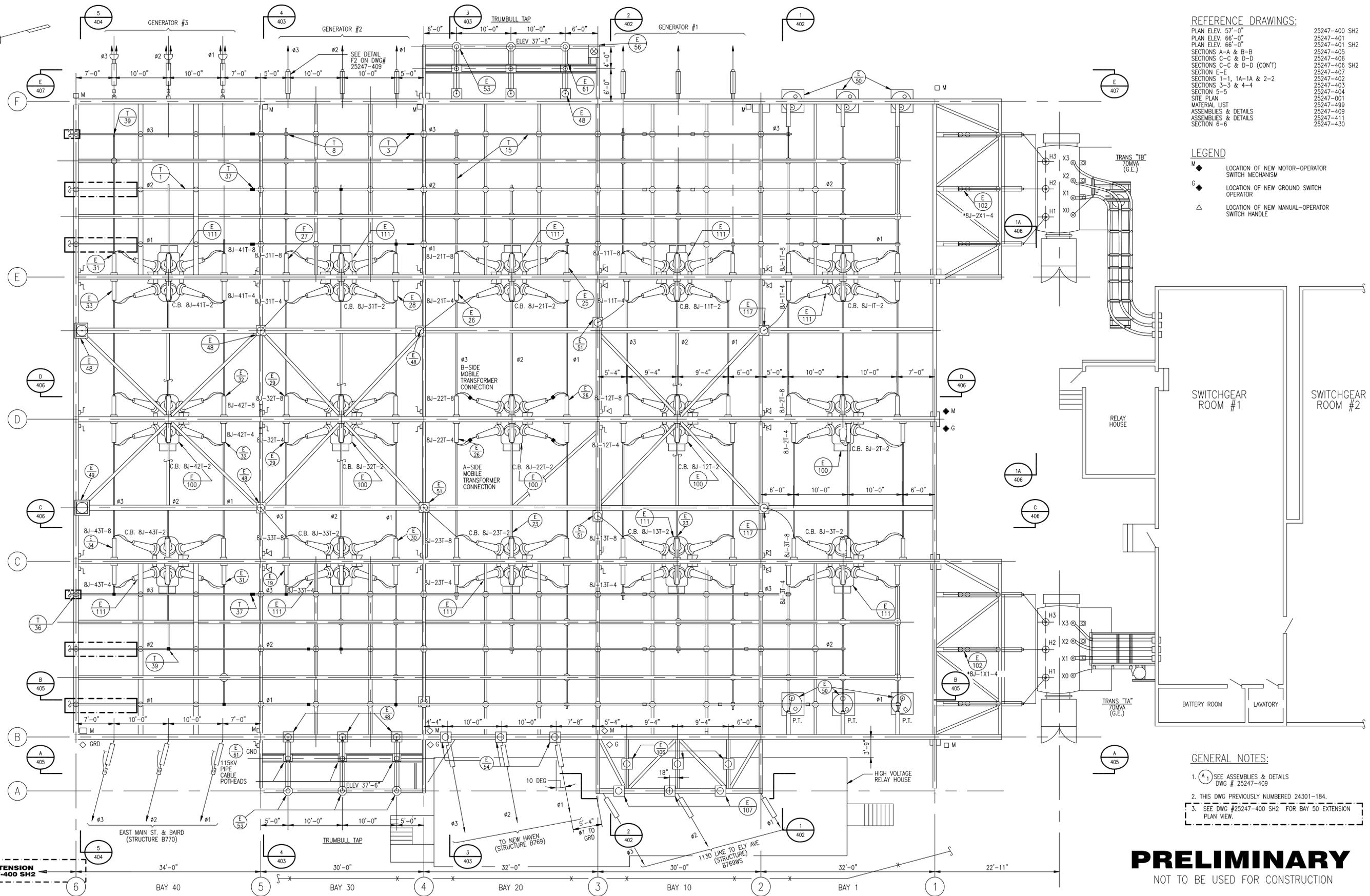
PEQUONNOCK SUBSTATION  
ELECTRICAL SITE PLAN

Drawn	Date	Scale	CAD FILE NAME	SEQUENCE No.	DRAWING NUMBER
Chkd.	4/2/87	1"=30'-0"	047780		25247-001
	Design Engr.	Design Supv.			



- REFERENCE DRAWINGS:**
- PLAN ELEV. 57'-0"
  - PLAN ELEV. 66'-0"
  - PLAN ELEV. 66'-0"
  - SECTIONS A-A & B-B
  - SECTIONS C-C & D-D
  - SECTIONS C-C & D-D (CON'T)
  - SECTION E-E
  - SECTIONS 1-1, 1A-1A & 2-2
  - SECTIONS 3-3 & 4-4
  - SECTION 5-5
  - SITE PLAN
  - MATERIAL LIST
  - ASSEMBLIES & DETAILS
  - ASSEMBLIES & DETAILS
  - SECTION 6-6
- 25247-400 SH2
  - 25247-401
  - 25247-401 SH2
  - 25247-405
  - 25247-406
  - 25247-406 SH2
  - 25247-407
  - 25247-402
  - 25247-403
  - 25247-404
  - 25247-001
  - 25247-499
  - 25247-409
  - 25247-411
  - 25247-430

- LEGEND**
- M ◆ LOCATION OF NEW MOTOR-OPERATOR SWITCH MECHANISM
  - G ◆ LOCATION OF NEW GROUND SWITCH OPERATOR
  - △ LOCATION OF NEW MANUAL-OPERATOR SWITCH HANDLE



- GENERAL NOTES:**
1. (A) SEE ASSEMBLIES & DETAILS DWG # 25247-409
  2. THIS DWG PREVIOUSLY NUMBERED 24301-184.
  3. SEE DWG #25247-400 SH2 FOR BAY 50 EXTENSION PLAN VIEW.

FOR BAY 50 EXTENSION SEE DWG 25247-400 SH2

**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION



**BLACK & VEATCH**  
PROJECT NO. 16341  
DRAWN CAD  
DESIGNED TYP  
APPROVED DJK  
CHECKED TJJ

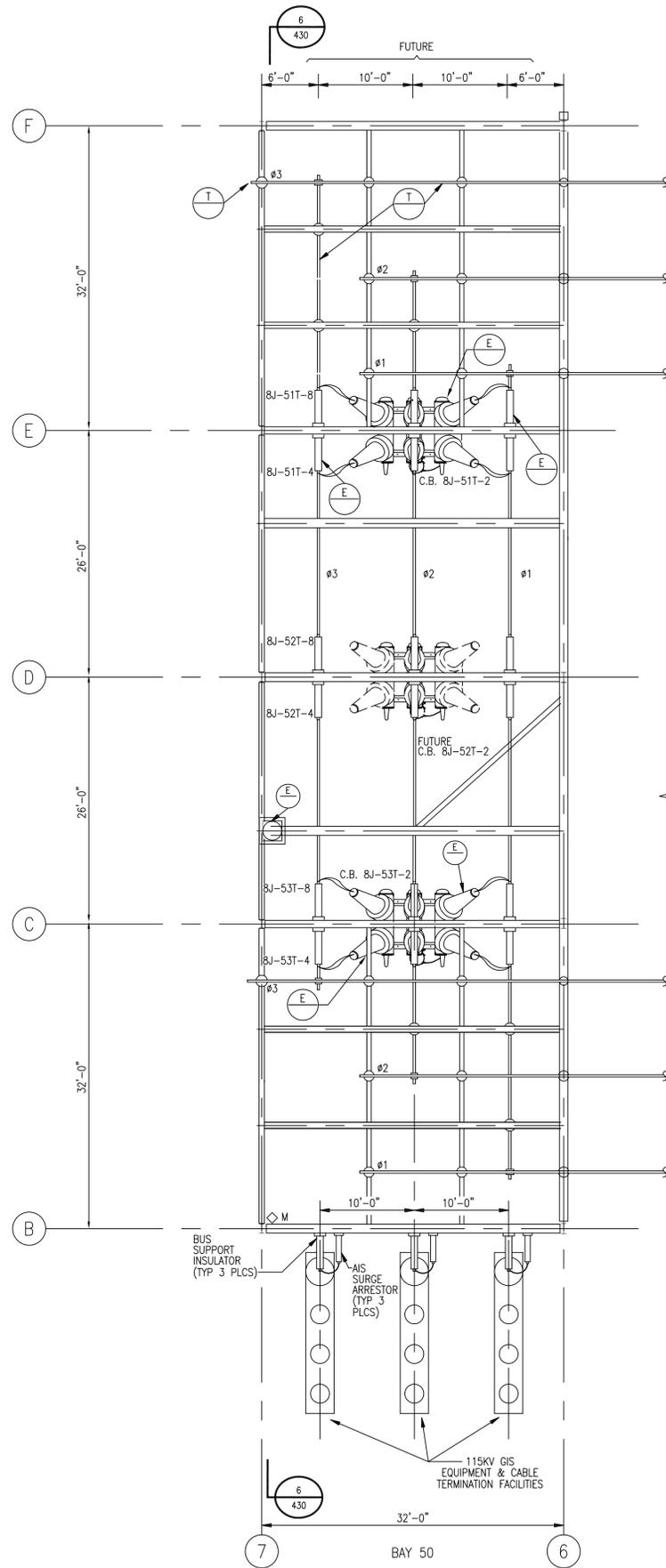
11 04-11-05	BAY 50 EXTENSION	CC	JDC
10 08-31-93	CONFORMED TO CONSTRUCTION RECORDS	ALP	DJK MJP DJK
No	Date	By	Chkd. Engr. Supv.

**ui** The United Illuminating Company  
157 Church St. New Haven, Ct. 06506

Drawn \_\_\_\_\_ Date 04-02-87 Scale: 1/8"=1'-0"  
Chkd. \_\_\_\_\_ Design Engr. J. LONG Design Supv. S.SIEDZIK

PEQUONNOCK SUBSTATION  
115KV EQUIPMENT PLAN  
ELEV 57'-0" & BELOW

CAD FILE NAME: 047787 SEQUENCE No.: 047787 DRAWING NUMBER: 25247-400



CONTINUED ON DWG.  
#25247-400

**REFERENCE DRAWINGS:**

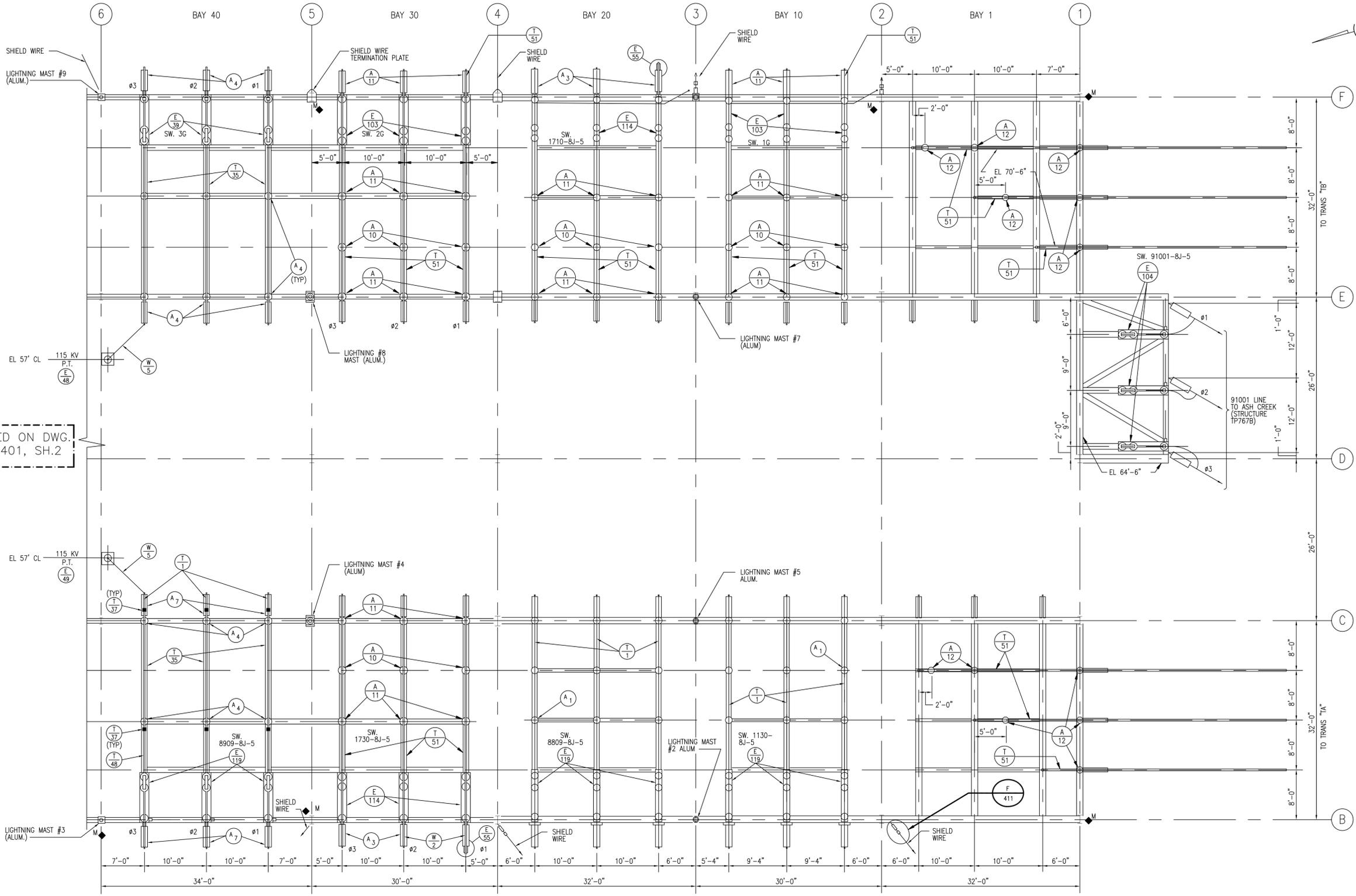
PLAN ELEV. 57'-0"	25247-400
PLAN ELEV. 66'-0"	25247-401
PLAN ELEV. 66'-0"	25247-401 SH2
SECTIONS A-A & B-B	25247-405
SECTIONS C-C & D-D	25247-406
SECTIONS C-C & D-D (CON'T)	25247-406 SH2
SECTION E-E	25247-407
SECTIONS 1-1, 1A-1A & 2-2	25247-402
SECTIONS 3-3 & 4-4	25247-403
SECTION 5-5	25247-404
SITE PLAN	25247-001
MATERIAL LIST	25247-499
ASSEMBLIES & DETAILS	25247-409
ASSEMBLIES & DETAILS	25247-411
SECTION 6-6	25247-430

**NOTES:**

- SEE DWG. #25247-400 FOR LEGEND.
- SEE DWG #25247-400 FOR BAY'S 40, 30, 20, 10 & 1.

**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION

				<b>PEQUONNOCK SUBSTATION</b> 115KV EQUIPMENT PLAN ELEV 57'-0" & BELOW (BAY 50 EXTENSION)	
PROJECT NO. 136745		157 Church St. New Haven, Ct. 06506		CAD FILE NAME	SEQUENCE No.
DRAWN CC		Drawn	Date -- --	Scale: 1/8"=1'-0"	DRAWING NUMBER
DESIGNED JDG		Chkd.	Design Engr. --	Design Supv. --	047787SH2
APPROVED	0 04-11-05 INITIAL ISSUE-50 BAY EXTENSION	By	Chkd.	Engr.	Supv.
CHECKED	No Date Revision	By	Chkd.	Engr.	Supv.

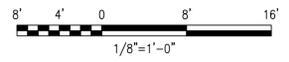


CONTINUED ON DWG. #25247-401, SH.2

- REFERENCE DRAWINGS:**
- PLAN ELEV. 57'-0" 25247-400
  - PLAN ELEV. 57'-0" 25247-400 SH2
  - PLAN ELEV. 66'-0" 25247-401 SH2
  - SECTIONS A-A & B-B 25247-405
  - SECTIONS C-C & D-D 25247-406
  - SECTIONS C-C & D-D (CON'T) 25247-406 SH2
  - SECTION E-E 25247-407
  - SECTIONS 1-1, 1A-1A & 2-2 25247-402
  - SECTIONS 3-3 & 4-4 25247-403
  - SECTION 5-5 25247-404
  - SITE PLAN 25247-001
  - MATERIAL LIST 25247-499
  - ASSEMBLIES & DETAILS 25247-409
  - ASSEMBLIES & DETAILS 25247-411
  - SECTION 6-6 25247-430

- GENERAL NOTES:**
1. (A1) SEE ASSEMBLIES & DETAILS DWG # 25247-409
  2. PLAN ELEV. 83.0 SEE DWG # 25247-402 (SEC. 1-1 & 2-2)
  3. THIS DWG PREVIOUSLY NUMBERED 24301-185
  4. SEE DWG 25247-400 FOR LEGEND
  5. GROUND SWITCHES ADDED AND LIVE PARTS CHANGED ON LINE SWITCHES 1710 AND 1730.
  6. DAMPING CABLE IN ALL NEW HORIZONTAL BUS RUNS. USE 336.4 MCM IN 3 INCH BUS; 795 MCM IN 5 INCH BUS.
  7. SEE DWG #2547-401 SH2 FOR BAY 50 EXTENSION PLAN AT ELEVATION 66'-6".

**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION



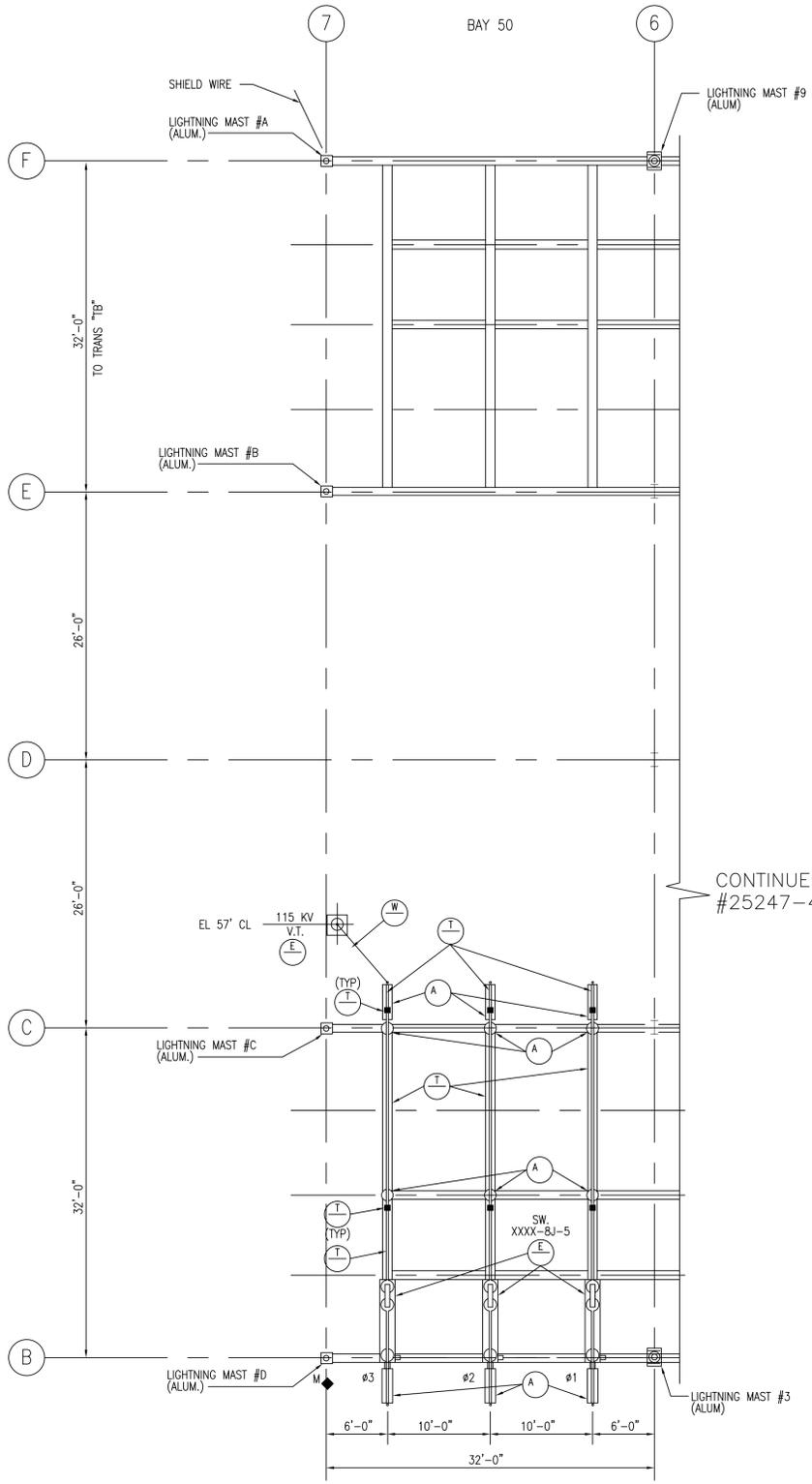
	<b>BLACK &amp; VEATCH</b>
PROJECT NO.	16341
DRAWN	CAD
DESIGNED	TVP
APPROVED	DJK
CHECKED	TJJ

DATE	04-11-05	BY	DJK	CHKD.	JDC
DATE	08-31-93	BY	DJK	CHKD.	MJP
DATE		BY		CHKD.	DJK
DATE		BY		CHKD.	

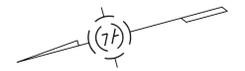
**The United Illuminating Company**  
157 Church St. New Haven, Ct. 06506

PEQUONNOCK SUBSTATION PLAN ELEV. 66'-6"		
CAD FILE NAME	SEQUENCE No.	DRAWING NUMBER
047788	047788	25247-401

Drawn \_\_\_\_\_ Date 04-02-89 Scale: 1/8"=1'-0"  
 Chkd. \_\_\_\_\_ Design Engr. J. LONG Design Supv. S.SIEDZIK



CONTINUED ON DWG.  
#25247-406, SH.1

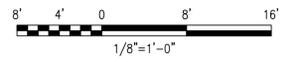


**REFERENCE DRAWINGS:**

PLAN ELEV. 57'-0"	25247-400
PLAN ELEV. 57'-0"	25247-400 SH2
PLAN ELEV. 66'-0"	25247-401
SECTIONS A-A & B-B	25247-405
SECTIONS C-C & D-D	25247-406
SECTIONS C-C & D-D (CON'T)	25247-406 SH2
SECTION E-E	25247-407
SECTIONS 1-1, 1A-1A & 2-2	25247-402
SECTIONS 3-3 & 4-4	25247-403
SECTION 5-5	25247-404
SITE PLAN	25247-001
MATERIAL LIST	25247-499
ASSEMBLIES & DETAILS	25247-409
ASSEMBLIES & DETAILS	25247-411
SECTION 6-6	25247-430

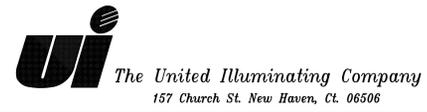
- GENERAL NOTES:**
- SEE DWG 25247-400 FOR LEGEND
  - DAMPING CABLE IN ALL NEW HORIZONTAL BUS RUNS, USE 336.4 MCM IN 3 INCH BUS, 795 MCM IN 5 INCH BUS.

**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION



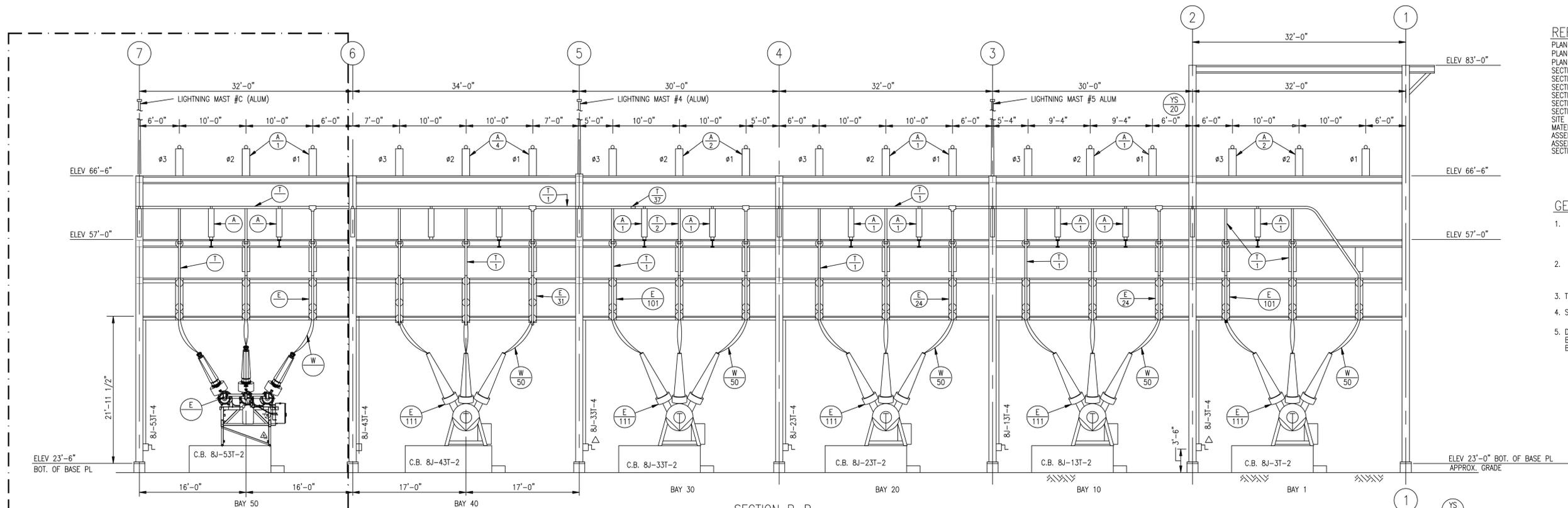
	BLACK & VEATCH
PROJECT NO. 136745	
DRAWN	CC
DESIGNED	JDG
APPROVED	
CHECKED	

No.	Date	Revision	By	Chkd.	Engr.	Supv.
0	04-11-05	INITIAL ISSUE - BAY 50 EXTENSION	CC		JDG	



Drawn	Date	Scale: 1/8"=1'-0"
Chkd.	Design Engr.	Design Supv.

PEQUONNOCK SUBSTATION PLAN ELEV. 66'-6" (BAY 50 EXTENSION)		
CAD FILE NAME	SEQUENCE No.	DRAWING NUMBER
047788SH2		25247-401 SH2



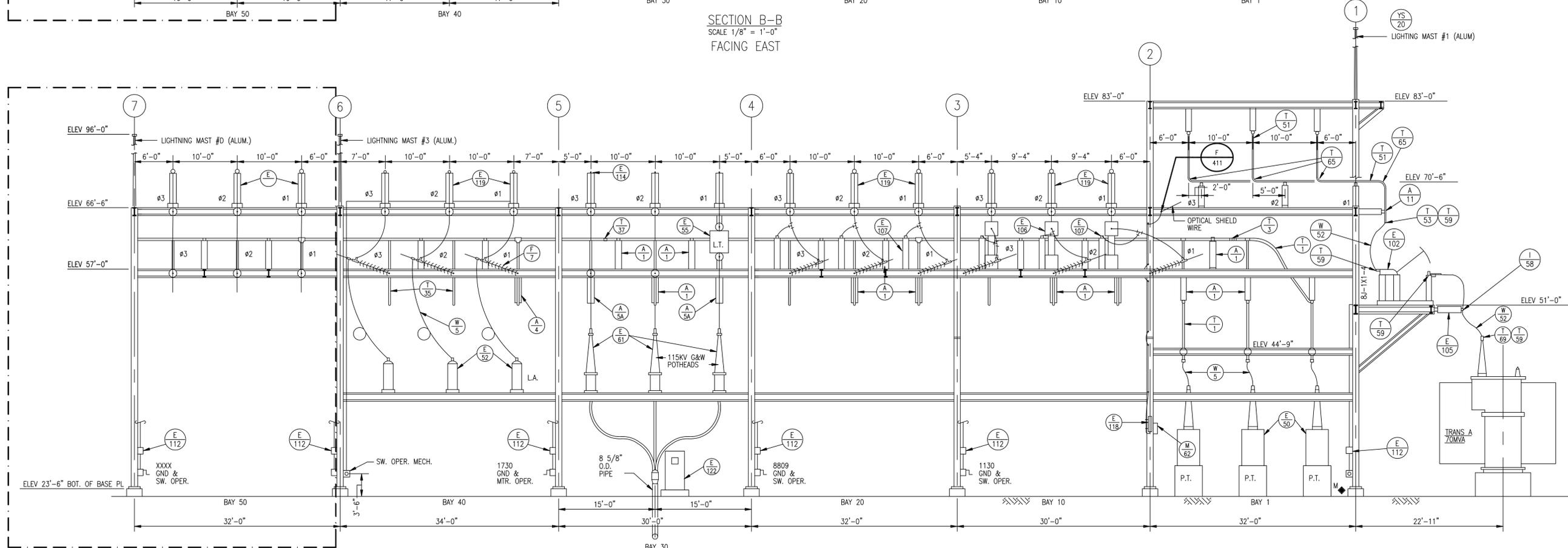
SECTION B-B  
SCALE 1/8" = 1'-0"  
FACING EAST

REFERENCE DRAWINGS:

- PLAN ELEV. 57'-0" 25247-400
- PLAN ELEV. 57'-0" 25247-400 SH2
- PLAN ELEV. 66'-0" 25247-401
- SECTIONS C-C & D-D 25247-406
- SECTIONS C-C & D-D (CONT) 25247-406 SH2
- SECTION E-E 25247-407
- SECTIONS 1-1, 1A-1A & 2-2 25247-402
- SECTIONS 3-3 & 4-4 25247-403
- SECTION 5-5 25247-404
- SITE PLAN 25247-001
- MATERIAL LIST 25247-499
- ASSEMBLIES & DETAILS 25247-409
- ASSEMBLIES & DETAILS 25247-411
- SECTION 6-6 25247-430

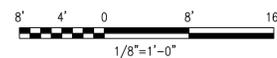
GENERAL NOTES

1. (A1) & (A2) ARE SIMILAR (A1) ON DWG'S MAY BE AN (A1)
2. (F1) & (F2) SEE ASSEMBLIES & DETAILS ON #25247-409.
3. THIS DWG PREVIOUSLY NUMBERED 24301-189
4. SEE DWG 25247-400 FOR LEGEND
5. DAMPING CABLE IN ALL NEW HORIZONTAL BUS RUNS. USE 336.4 MCM IN 3 INCH BUS; 795 MCM IN 5 INCH BUS.



SECTION A-A  
SCALE 1/8" = 1'-0"  
FACING EAST

**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION

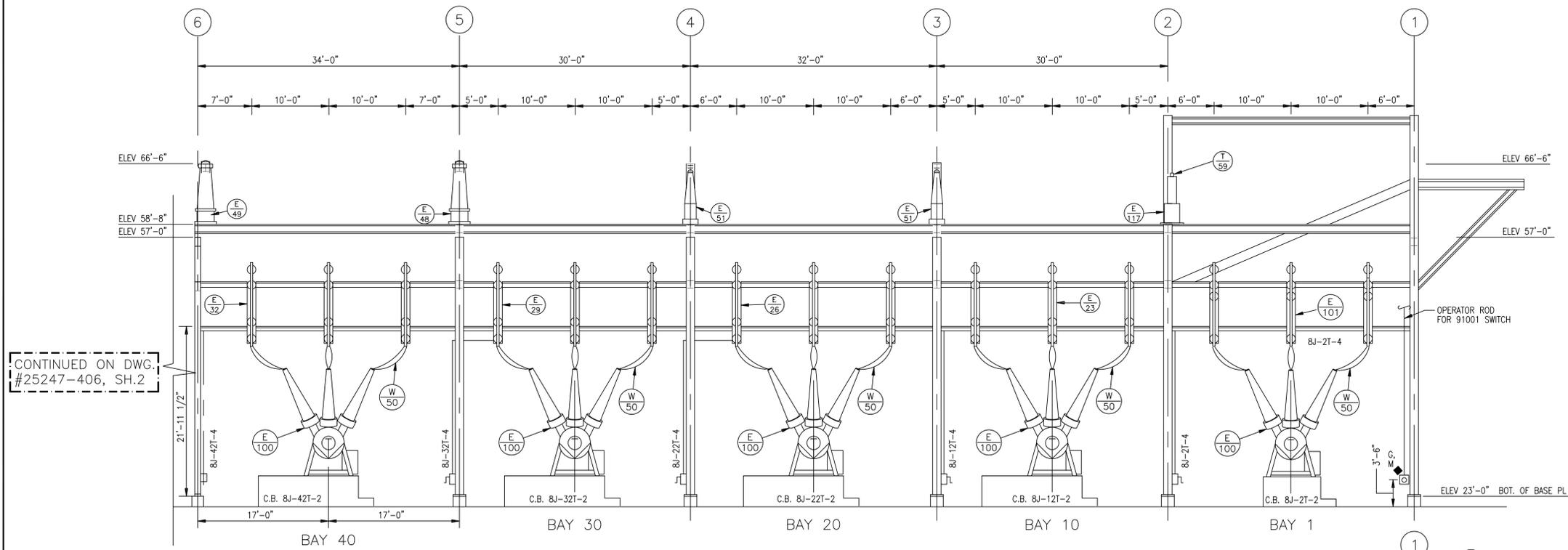


<b>BLACK &amp; VEATCH</b>	
PROJECT NO. 16341	
DRAWN JSF	
DESIGNED TVP	10 04-11-05 BAY 50 EXTENSION
APPROVED DJK	9 08-31-93 CONFORMED TO CONSTRUCTION RECORDS
CHECKED TJJ	No Date Revision

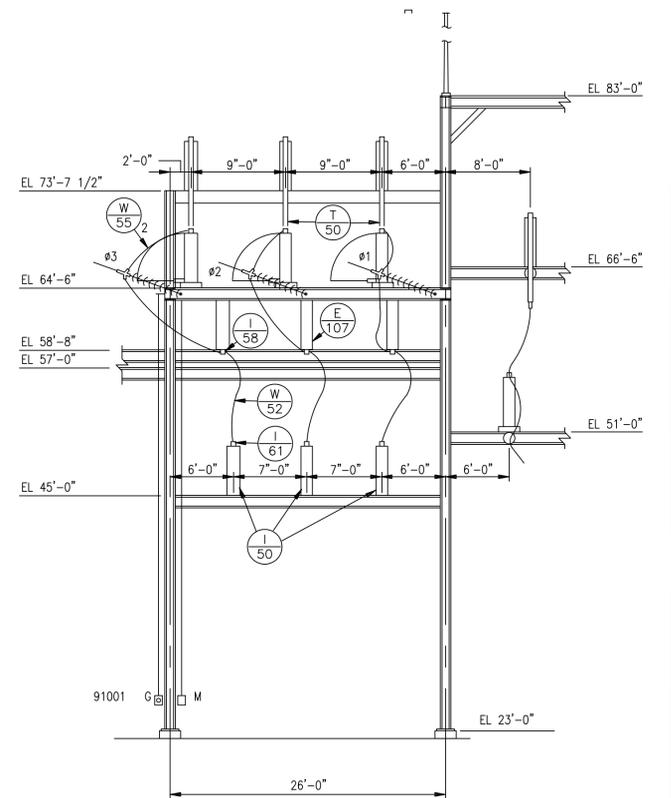


PEQUONNOCK SUBSTATION  
SECTIONS A-A & B-B

CC ALP	DJK	JDG	DJK	Drawn	Date 04-02-87	Scale: 1/8" = 1'-0"	CAD FILE NAME	SEQUENCE No.	DRAWING NUMBER
By	Chkd.	Engr.	Supv.	Chkd.	Design Engr. J. LONG	Design Supv. S. SIEDZIK	047792		25247-405



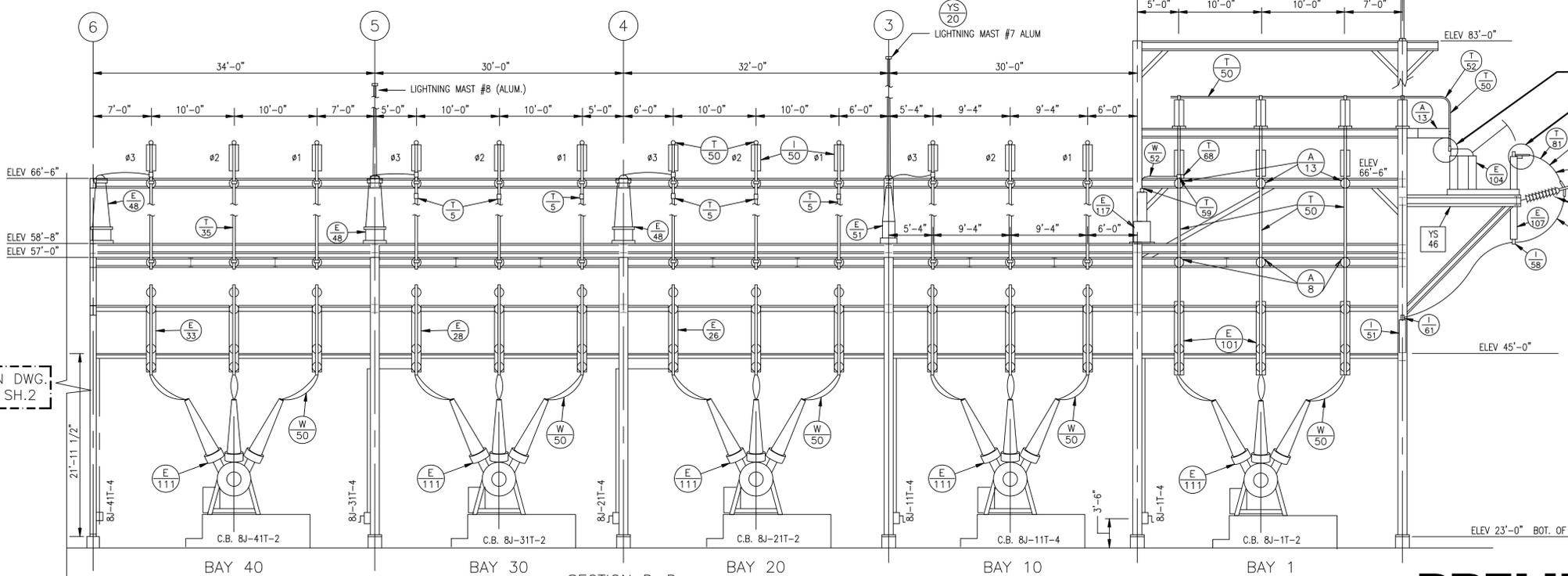
SECTION C-C  
SCALE 1/8" = 1'-0"  
FACING EAST



SECTION 1A-1A  
SCALE 1/8"=1'-0"

CONTINUED ON DWG. #25247-406, SH.2

CONTINUED ON DWG. #25247-406, SH.2

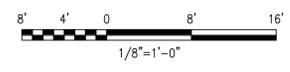


SECTION D-D  
SCALE 1/8" = 1'-0"  
FACING EAST

**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION

- REFERENCE DRAWINGS:
- PLAN ELEV. 57'-0" 25247-400
  - PLAN ELEV. 57'-0" 25247-400 SH2
  - PLAN ELEV. 66'-0" 25247-401
  - SECTION C-C & D-D 25247-401 SH2
  - SECTIONS A-A & B-B 25247-405
  - SECTION C-C & D-D (CON'T) 25247-406 SH2
  - SECTION E-E 25247-407
  - SECTIONS 1-1, 1A-1A & 2-2 25247-402
  - SECTIONS 3-3 & 4-4 25247-403
  - SECTION 5-5 25247-404
  - SITE PLAN 25247-001
  - MATERIAL LIST 25247-499
  - ASSEMBLIES & DETAILS 25247-409
  - ASSEMBLIES & DETAILS 25247-411
  - SECTION 6-6 25247-430

- NOTES:
1. (A/T) SEE ASSEMBLIES & DETAILS DWG # 25247-409
  2. THIS DWG PREVIOUSLY NUMBERED 24301-190
  3. SEE DWG 25247-400 FOR LEGEND
  4. DAMPING CABLE IN ALL NEW HORIZONTAL BUS RUNS. USE 336.4 MCM IN 3 INCH BUS; 795 MCM IN 5 INCH BUS.
  5. SEE DWG #25247-406 SH2 FOR BAY 50 EXTENSION.



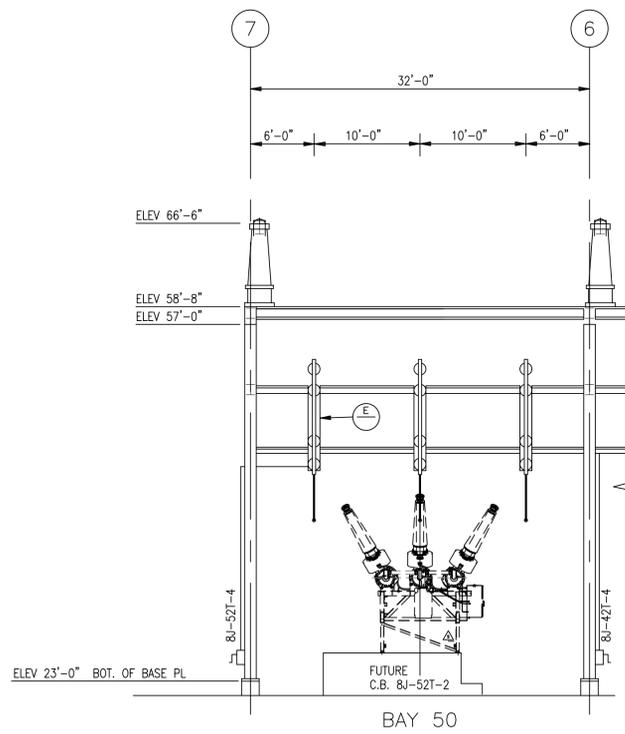
BLACK & VEATCH	
PROJECT NO. 16341	
DRAWN CAD	
DESIGNED TYP	11 04-11-05 BAY 50 EXTENSION
APPROVED DJK	10 08-31-93 CONFORMED TO CONSTRUCTION RECORDS
CHECKED TJJ	No Date Revision

CC	JDC				
ALP	DJK	MJP	DJK		
By	Chkd.	Engr.	Supv.		

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157 Church St. New Haven, Ct. 06506

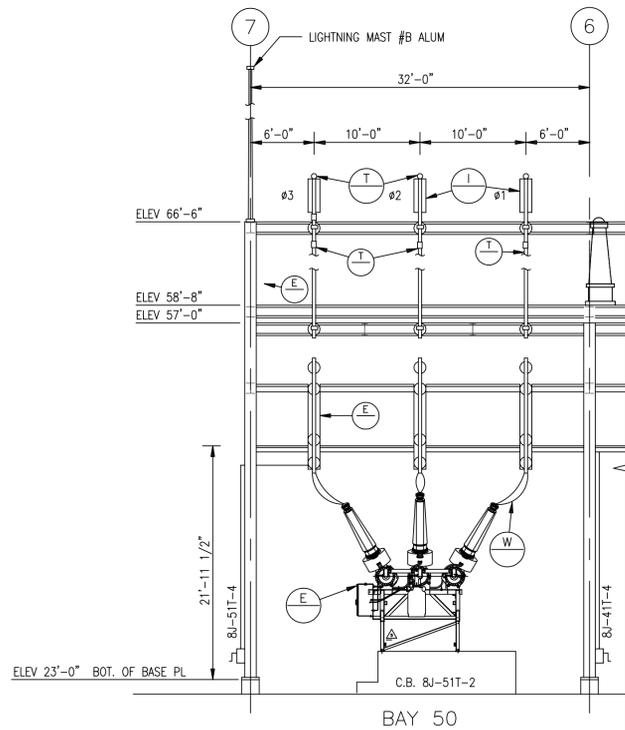
PEQUONNOCK SUBSTATION  
SECTIONS C-C & D-D

Drawn	Date 03-12-90	Scale: 1/8"=1'-0"	CAD FILE NAME	SEQUENCE No.	DRAWING NUMBER
Chkd.	Design Engr. J. LONG	Design Supv. S.SIEDZIK	047793	047793	25247-406



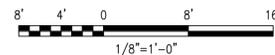
CONTINUED ON  
DWG. #25247-406, SH.1

SECTION C-C (CON'T)  
SCALE 1/8" = 1'-0"  
FACING EAST



CONTINUED ON  
DWG. #25247-406, SH.1

SECTION D-D (CON'T)  
SCALE 1/8" = 1'-0"  
FACING EAST



REFERENCE DRAWINGS:

PLAN ELEV. 57'-0"	25247-400
PLAN ELEV. 57'-0"	25247-400 SH2
PLAN ELEV. 66'-0"	25247-401
SECTIONS C-C & D-D	25247-401 SH2
SECTIONS A-A & B-B	25247-405
SECTIONS C-C & D-D (CON'T)	25247-406
SECTION E-E	25247-407
SECTIONS 1-1, 1A-1A & 2-2	25247-402
SECTIONS 3-3 & 4-4	25247-403
SECTION 5-5	25247-404
SITE PLAN	25247-001
MATERIAL LIST	25247-499
ASSEMBLIES & DETAILS	25247-409
ASSEMBLIES & DETAILS	25247-411
SECTION 6-6	25247-430

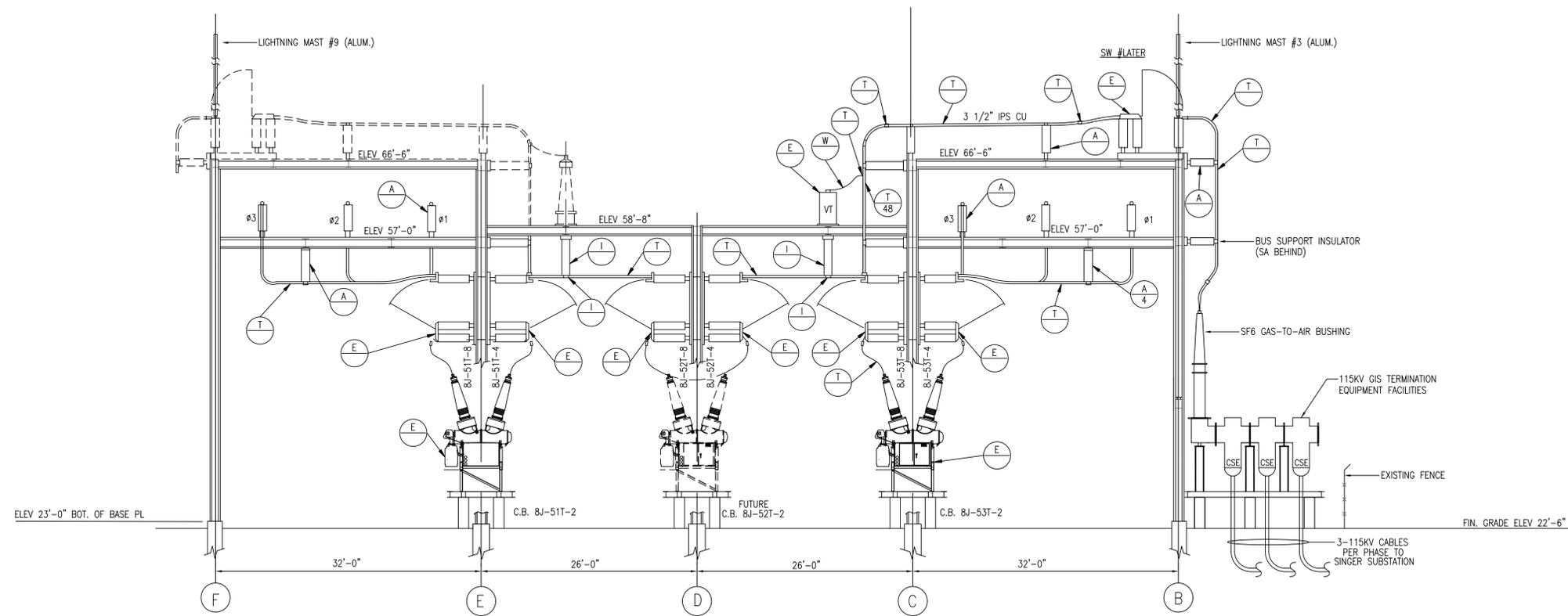
NOTES:

- SEE DWG 25247-400 FOR LEGEND
- DAMPING CABLE IN ALL NEW HORIZONTAL BUS RUNS. USE 336.4 MCM IN 3 INCH BUS; 795 MCM IN 5 INCH BUS.

**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION

	PROJECT NO. 136745		PEQUONNOCK SUBSTATION SECTIONS C-C & D-D (CON'T) (BAY 50 EXTENSION)	
	DRAWN CC DESIGNED JDG APPROVED CHECKED		0 04-11-05 INITIAL ISSUE - BAY 50 EXTENSION No Date Revision	CC JDC By Chkd. Engr. Supv.





SECTION 6-6  
SCALE 1/8" = 1'-0"  
BAY 50

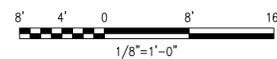
REFERENCE DRAWINGS:

PLAN ELEV. 57'-0"	25247-400
PLAN ELEV. 66'-0"	25247-401
PLAN ELEV. 66'-0"	25247-401 SH2
SECTIONS C-C & D-D	25247-401 SH2
SECTIONS A-A & B-B	25247-405
SECTIONS C-C & D-D	25247-406
SECTIONS C-C & D-D (CON'T)	25247-406 SH2
SECTION E-E	25247-407
SECTIONS 1-1, 1A-1A & 2-2	25247-402
SECTIONS 3-3 & 4-4	25247-403
SECTION 5-5	25247-404
SITE PLAN	25247-001
MATERIAL LIST	25247-499
ASSEMBLIES & DETAILS	25247-409
ASSEMBLIES & DETAILS	25247-411
SECTION 6-6	25247-430

**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION

GENERAL NOTES:

1. SEE DWG 25247-400 FOR LEGEND



PROJECT NO. 136745

DRAWN CC

DESIGNED JDG

APPROVED

CHECKED

0	04-11-05	INITIAL ISSUE - BAY 50 EXTENSION	CC	JDG
No	Date	Revision	By	Chkd. Engr. Supv.



The United Illuminating Company  
157 Church St. New Haven, Ct. 06506

Drawn CC

Date

Scale: 1/8"=1'-0"

Chkd.

Design Engr.

Design Supv.

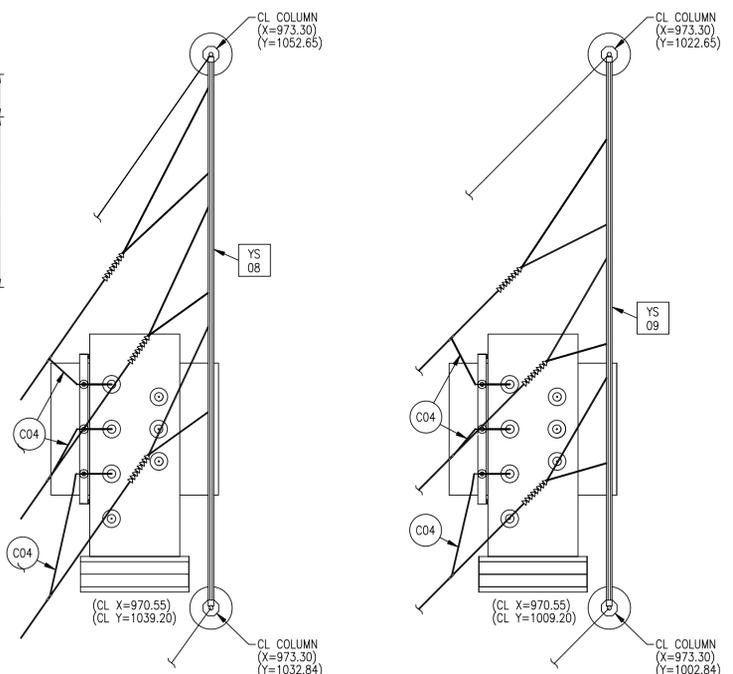
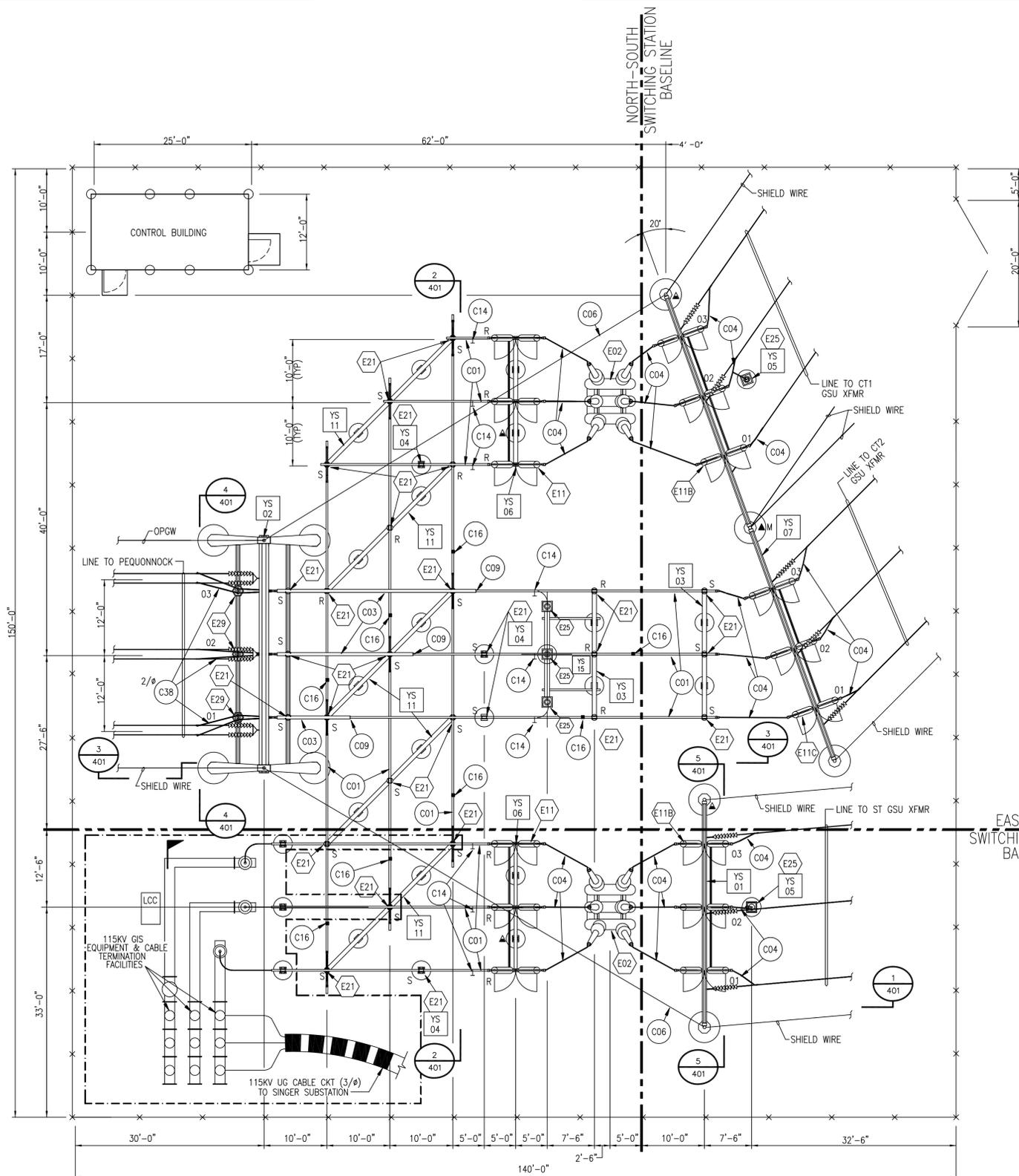
PEQUONNOCK SUBSTATION  
SECTION 6-6  
(BAY 50 EXTENSION)

CAD FILE NAME

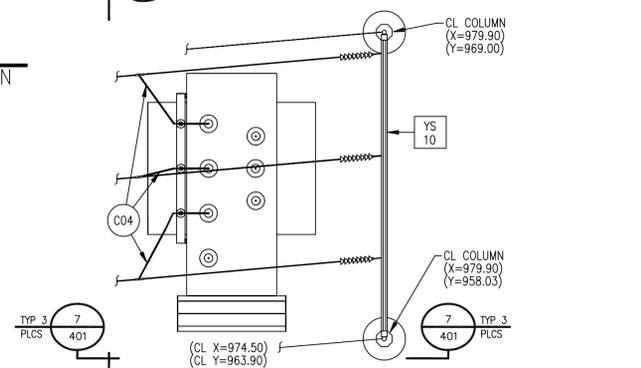
SEQUENCE No.

DRAWING NUMBER

25247-430



PARTIAL PLAN CT1 GSU XFMR (11UBF) PLAN  
 PARTIAL PLAN CT2 GSU XFMR (12UBF) PLAN



PARTIAL PLAN ST GSU XFMR (10UBF) PLAN

**GENERAL NOTES:**

- SEE MATERIAL LISTS FOR DESCRIPTIONS OF EQUIPMENT, STRUCTURES, AND FITTINGS.
- 556.5 MCM ACSR (ITEM C05) VIBRATION DAMPING CONDUCTOR SHALL BE INSTALLED INSIDE EACH HORIZONTAL RUN OF TUBULAR BUS LONGER THAN 15 FEET.
- GSU TRANSFORMER AND DEADEND TOWER LOCATIONS ARE BASED ON SIEMENS LOCAL PLANT (X,Y) COORDINATE SYSTEM. VALUES INDICATED ARE IN METERS.

**REFERENCE DRAWINGS**

ELECTRICAL SITE PLAN	25250-001
SITE GRADING	25250-002
115KV SWITCHYARD SECTIONS	25250-401
115KV SWITCHYARD SECTIONS	25250-401 SH2
115KV SWITCHYARD DETAILS	25250-402
SWITCHYARD GROUNDING PLAN	25250-411
SWITCHYARD RACEWAY PLAN	25250-412
LIGHTING & COMMUNICATIONS PLAN	25250-410
YARD STRUCTURES	25250-420 THRU 426
SWITCHYARD FOUNDATION PLAN	25250-430

**LEGEND**

- R RIGID (WELDED) BUS FITTING
- S SLIP (NON-WELDED) BUS FITTING
- GROUNDING STUD
- BUS OR JUMPER FITTING
- 14' CHAIN LINK FENCE
- ▲ MANUAL SWITCH OPERATOR LOCATION, WITH KIRK KEY INTERLOCK
- ▲M MOTORIZED SWITCH OPERATOR LOCATION

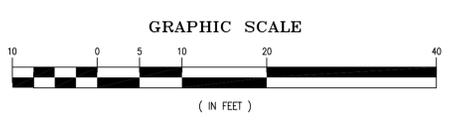
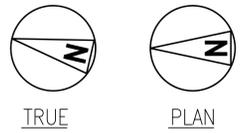
**CONDUCTOR LEGEND**

- C01 3" ALUMINUM BUS
- C03 5" ALUMINUM BUS
- C04 1590 MCM ACSR
- C05 556.5 MCM ACSR
- C06 7-#6 ALUMOWELD
- C38 2156 MCM ACSR

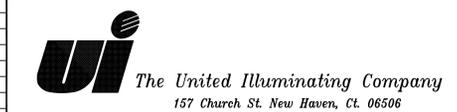
**CONSTRUCTION NOTES:**

- ALL SITEWORK, FENCING, FOUNDATIONS AND BELOW GRADE GROUNDING AND RACEWAY WILL BE INSTALLED BY THE CONTRACTOR.
- COORDINATES FOR PARTIAL PLANS ARE BASED ON SIEMENS LOCAL PLANT (X,Y) COORDINATE SYSTEM. VALUES INDICATED ARE IN METERS.

BUS AND EQUIPMENT PLAN  
 SCALE: 1"=10'-0"



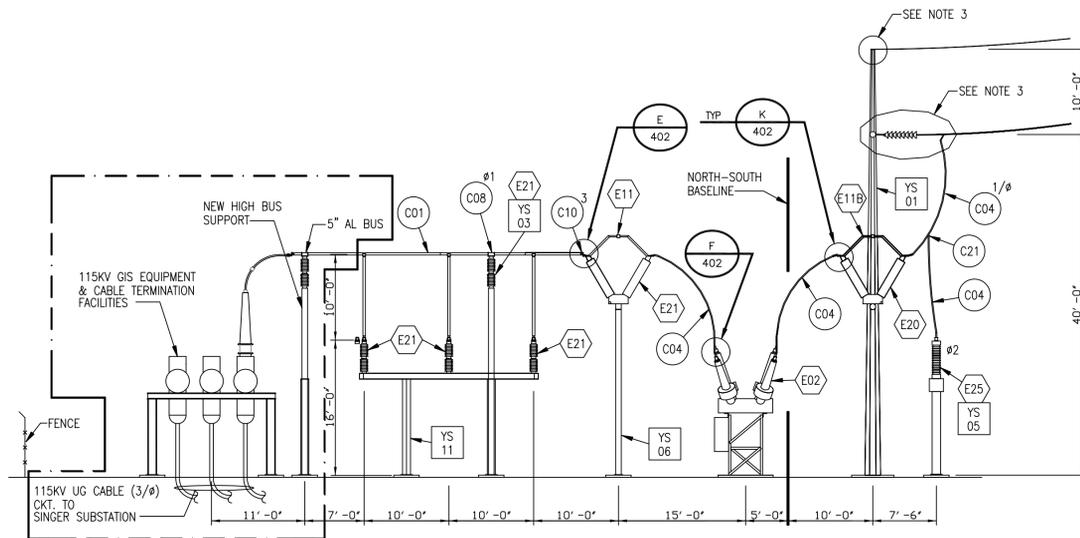
BLACK & VEATCH		
PROJECT NO. 39602		
DRAWN RLP	04-11-05 REVISED FOR SINGER 115KV CKT TERMINATION	
DESIGNED MJP	08-11-99 CCVT STRUCTURE MODIFICATIONS	
APPROVED DJK	08-18-98 BRIDGEPORT ENERGY (AS BUILT)	
CHECKED ESF	02-23-98 GENERAL REVISIONS	
	11-11-97 ISSUED FOR CONSTRUCTION	
	10-28-97 ISSUED FOR FABRICATION	
	09-26-97 ISSUED TO UI FOR COMPANY REVIEW	
No	Date	Revision



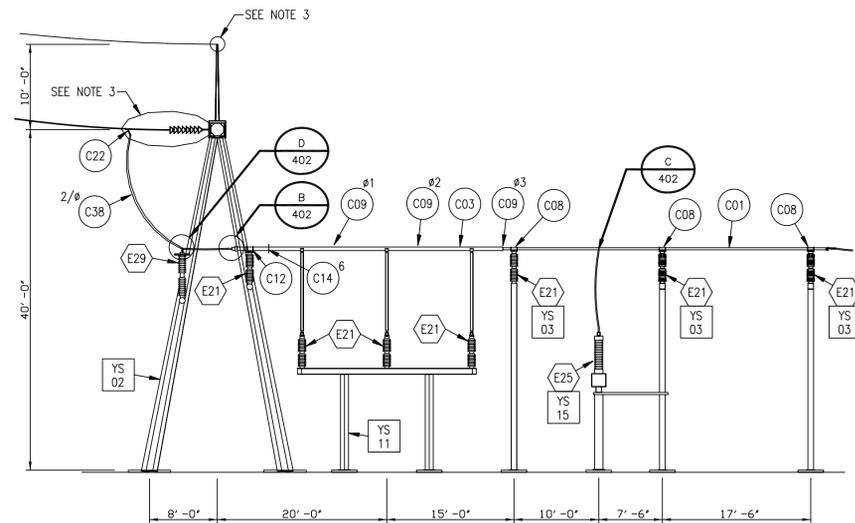
Drawn R.L.P.	Date 9/26/97	Scale: 1"=10'-0"
Chkd.	Design Engr.	Design Supv.

BRIDGEPORT ENERGY  
 SWITCHING STATION  
 SWITCHYARD BUS &  
 EQUIPMENT PLAN

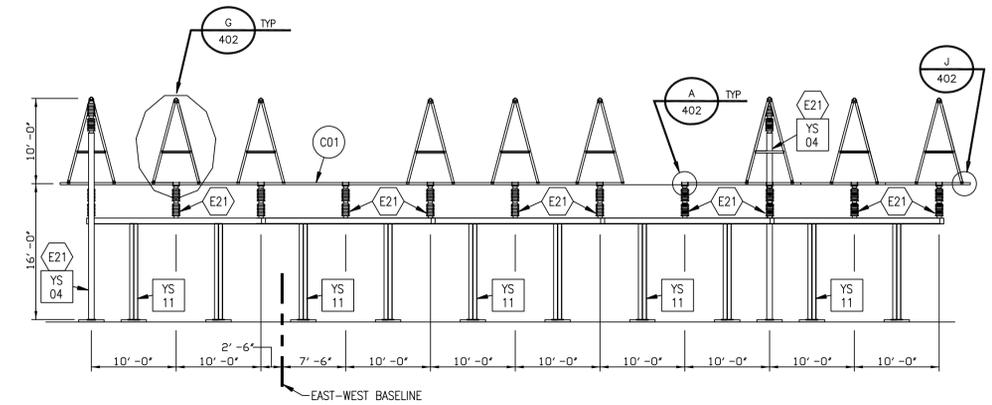
CAD FILE NAME 059297	SEQUENCE No.	DRAWING NUMBER 25250-400
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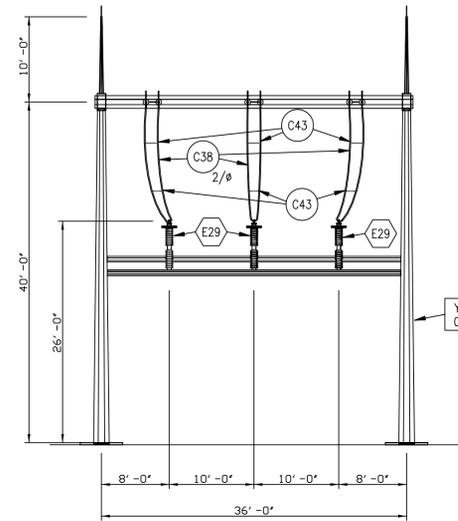
SECTION 1  
SCALE: 1"=10'-0"



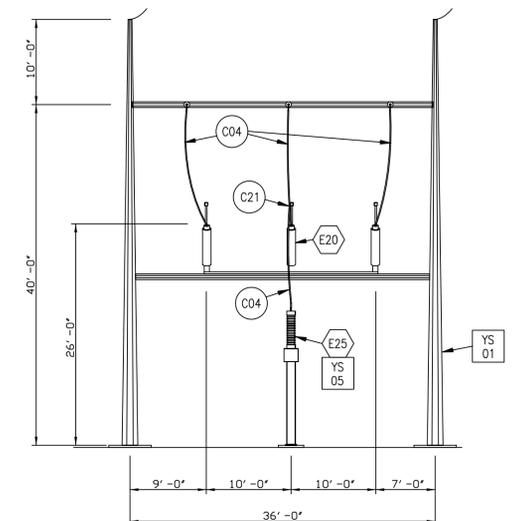
SECTION 3  
SCALE: 1"=10'-0"



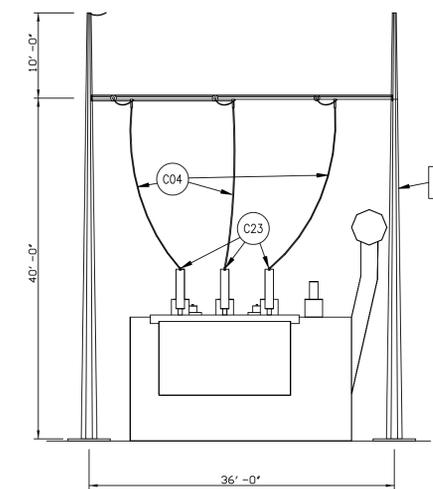
SECTION 2  
SCALE: 1"=10'-0"



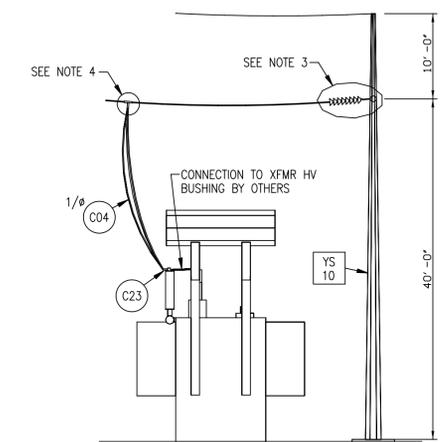
SECTION 4  
SCALE: 1"=10'-0"



SECTION 5  
SCALE: 1"=10'-0"



SECTION 6  
SCALE: 1"=10'-0"



SECTION 7  
SCALE: 1"=10'-0"

GENERAL NOTES:

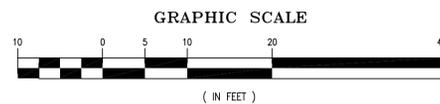
- SEE MATERIAL LISTS FOR DESCRIPTIONS OF EQUIPMENT, STRUCTURES, AND FITTINGS.
- SEE DWG 25250-400 FOR ADDITIONAL NOTES AND LEGEND.
- SEE DWG 25250-422 THRU 426 FOR SHIELD WIRE AND CONDUCTOR TERMINATION DETAILS AND MATERIAL LIST.
- SEE DWG 24302-600 FOR ASSEMBLY DETAIL CTA-1.

CONSTRUCTION NOTES:

- SEE DWG 25250-400 FOR CONSTRUCTION NOTES.

REFERENCE DRAWINGS

SWITCHYARD BUS AND EQUIPMENT PLAN	25250-400
115KV SWITCHYARD SECTIONS	25250-401 SH2
115KV SWITCHYARD DETAILS	25250-402



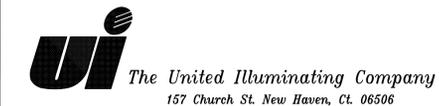
**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION



PROJECT NO. 39602

DRAWN	RLP
DESIGNED	MJP
APPROVED	
CHECKED	ESF

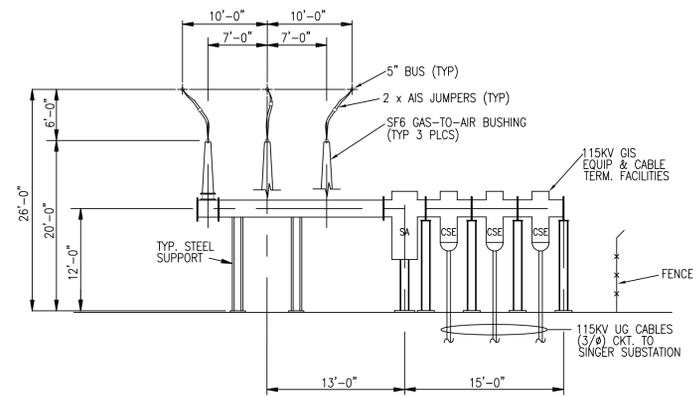
No	Date	Revision	By	Chkd.	Engr.	Supv.
5	04-11-05	REVISED FOR SINGER 115KV CKT TERMINATION	CC		JDG	
4	08-11-99	CCVT STRUCTURE MODIFICATIONS	AMB	JM	JM	
3	08-18-98	BRIDGEPORT ENERGY (AS BUILT)	W.J.	K.L.K.	M.M.	
2	11-11-97	ISSUED FOR CONSTRUCTION	RLP	ESF	BPL	DJK
1	10-28-97	ISSUED FOR FABRICATION	RLP	ESF	BPL	
0	09-26-97	ISSUED TO UI FOR COMPANY REVIEW	RLP	MJP		



Drawn	R.L.P.	Date	9/26/97	Scale:	1"=10'-0"
Chkd.		Design Engr.		Design Supv.	

BRIDGEPORT ENERGY  
SWITCHING STATION  
115KV SWITCHYARD SECTIONS

CAD FILE NAME	SEQUENCE No.	DRAWING NUMBER
	059298	25250-401



SECTION 10-10  
SCALE 1" = 10'-0"

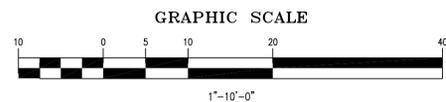
GENERAL NOTES:

1. SEE MATERIAL LISTS FOR DESCRIPTIONS OF EQUIPMENT, STRUCTURES, AND FITTINGS.
2. SEE DWG 25250-400 FOR ADDITIONAL NOTES AND LEGEND.

REFERENCE DRAWINGS

SWITCHYARD BUS AND EQUIPMENT PLAN	25250-400
115KV SWITCHYARD SECTIONS	25250-401
115KV SWITCHYARD DETAILS	25250-402

**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION



	PROJECT NO. 136745					BRIDGEPORT ENERGY SWITCHING STATION 115KV SWITCHYARD SECTIONS		
	DRAWN CC DESIGNED JDG APPROVED -- CHECKED	No Date	Revision	By Chkd. Engr. Supv.		Drawn CC Date Design Engr. -- Design Supv. --	Scale: 1"=10'-0" CAD FILE NAME 047791_2B	SEQUENCE No. 25250-401